



H.R. 20

To energize the future of America, move the United States toward great energy independence and security, increase production of clean, renewable, and nuclear energy, to promote research on and deploy greenhouse gas capture and storage options, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

DECEMBER 31, 2013

Mr. NGUYEN introduced the following bill; which was referred to the Committee on Energy and Commerce for a period to be subsequently determined by the Speaker, for consideration of such provisions as fall within the jurisdiction of the committee concerned.

A BILL

To energize the future of America, move the United States toward great energy independence and security, increase production of clean, renewable, and nuclear energy, to promote research on and deploy greenhouse gas capture and storage options, and for other purposes.

- 1 *Be it enacted by the Senate and House of*
- 2 *Representatives of the United States of America in*
- 3 *Congress assembled,*
- 4 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**
- 5 (a) SHORT TITLE.—This Act may be cited as the “Energizing
- 6 the Future of America Act of 2014”.
- 7 (b) TABLE OF CONTENTS.—The table of contents for this Act
- 8 is as follows:
- 9 Sec. 1. Short title; table of contents.

4

- 84 Sec. 422. Definitions.
- 85 Sec. 423. Energy Production Targets.
- 86 Sec. 424. Federal Renewable Energy Purchases.
- 87 Sec. 425. Coal Power Plant Efficiency Assessment and Replacement.
- 88 Sec. 426. Increased Hydroelectric Generation at Existing Federal
- 89 Facilities.
- 90 TITLE V—Energizing the Smart Grid
- 91 Sec. 501. Statement of Policy and Findings.
- 92 Sec. 502. Updated Smart Grid System Report.
- 93 Sec. 503. Smart Grid Task Force.
- 94 Sec. 504. Federal Matching Fund for Smart Grid Investment Costs.
- 95 Sec. 505. State Consideration of Smart Grid.
- 96 Sec. 506. DoE Study of Security Attributes of Smart Grid Systems.
- 97 Sec. 507. Transmission Planning and Siting.
- 98 Sec. 508 Support for Qualified Advanced Electric Transmission
- 99 Manufacturing Plants, Qualified High Efficiency
- 100 Transmission Property, and Qualified Advanced Electric
- 101 Transmission Property.
- 102 TITLE VI—EFFECTIVE DATE
- 103 Sec. 601. Effective Date.
- 104 **SEC. 2. FINDINGS.**
- 105 Congress makes the following findings:
- 106 (1) Non-renewable fossil fuels are a finite resource
- 107 which, while currently found in relative abundance, will
- 108 inevitably be depleted.
- 109 (2) Fossil fuels, by their nature as a carbon-based
- 110 energy source, contribute greatly to the atmospheric carbon
- 111 budget and levels of greenhouse gases, contributing to
- 112 global warming.
- 113 (3) To maintain a robust future of technological
- 114 progress, and leadership, the United States must move
- 115 toward a future of reliance on clean, renewable energy
- 116 sources.

2

- 10 Sec. 2. Findings.
- 11 Sec. 3. Definitions.
- 12 TITLE I—FUTURE PRODUCTION OF BIOFUELS
- 13 Subtitle A—Biofuels Standards
- 14 Sec. 101. Definitions.
- 15 Sec. 102. Renewable Fuel Standard Amendments.
- 16 Sec. 103. Study of the Impact of Renewable Fuel Standard.
- 17 Sec. 104. Environmental and Resource Conservation Impacts.
- 18 Sec. 105. Study of Credits for use of Renewable Electricity in Electric
- 19 Vehicles.
- 20 Sec. 106. Grants for Production of Advanced Biofuels.
- 21 Sec. 107. Effective Date, Savings Provision, and Transition Rules.
- 22 Subtitle B—Biofuels Research and Development
- 23 Sec. 111. Algal Biofuel.
- 24 Sec. 112. Biodiesel.
- 25 Sec. 113. Biogas.
- 26 Sec. 114. Waste Biomass Grant Program.
- 27 Sec. 115. Grants for Biofuel Production Research and Development in
- 28 Certain States
- 29 Sec. 116. Cellulosic Ethanol and Algal Biofuels Research
- 30 Sec. 117. Bioenergy Research and Development, Authorization of
- 31 Appropriation
- 32 TITLE II—Electrifying the Future of Transportation
- 33 Subtitle A—Transportation Electrification Technologies
- 34 Sec. 201. Definitions.
- 35 Sec. 202. Continuing Plug-in Electric Drive Vehicle Program.
- 36 Sec. 203. Continuing Near-Term Transportation Sector Electrification
- 37 Program.
- 38 Sec. 204. Electric Drive in Energy Policy Act of 1992.
- 39 Sec. 205. Advanced Fuel Cell and Battery Loan Guarantee Program.
- 40 Sec. 206. Electric Vehicle Manufacturing Incentive Program.
- 41 Subtitle B—Federal Vehicle Fleets
- 42 Sec. 211 Federal Fleet Conservation Requirements.
- 43 Subtitle C—Consumer Electric Vehicles
- 44 Sec. 221 Definitions.
- 45 Sec. 222. Findings.
- 46 Sec. 223. Electric Vehicle Manufacturing Standards.

5

- 117 (4) Increased focus on development of, and
- 118 implementation of technologies to utilize green, renewable
- 119 energy sources will afford the United States energy
- 120 independence from foreign nations while simultaneously
- 121 propelling our industries to the forefront of technological
- 122 innovation.
- 123 (5) Investment in energy research programs will
- 124 promote innovation through research and development, and
- 125 will improve the competitiveness of the United States.
- 126 (6) To complement the innovative new energy
- 127 generation technologies implemented to move from fossil
- 128 fuels, vehicles transportation must also transition from the
- 129 use of traditional fossil fuel combustion energy toward
- 130 electrification.
- 131 (7) Advanced nuclear reactor and reprocessing
- 132 technologies are uniquely poised to help expand the
- 133 Nation’s energy generation capacity, reduce greenhouse gas
- 134 emissions, and reduce stockpiles of spent nuclear fuel.
- 135 (8) A robust energy storage and distribution system,
- 136 secure from potential cyberthreats, will be necessary to
- 137 complement the implementation of green, renewable energy
- 138 sources.
- 139 (9) Investment in a National Smart Grid, like
- 140 investments in other Federal infrastructure building
- 141 activities, is an investment in our future.
- 142 (10) Properly structured, investment in these
- 143 programs can contribute to an improved quality of life;

3

- 47 Subtitle D—Electric Charging Infrastructure
- 48 Sec. 231. Electric Charging Station Requirements.
- 49 Sec. 232. Electric Vehicle Infrastructure.
- 50 TITLE III—Carbon Capture and Sequestration
- 51 Sec. 301. Definition.
- 52 Sec. 302. National Strategy.
- 53 Sec. 303. Regulations for Geologic Sequestration.
- 54 Sec. 304. Studies and Reports.
- 55 Sec. 305. Carbon Capture Grant Program.
- 56 Sec. 306. Review of Large-Scale Programs
- 57 Sec. 307. Geologic Sequestration and Research.
- 58 Sec. 308. Relation to Safe Water Drinking Act.
- 59 Sec. 309. Safety Research.
- 60 Sec. 310. University Based Research and Development Grant Program
- 61 TITLE IV—CLEAN, RENEWABLE ENERGY RESOURCES
- 62 Subtitle A—Nuclear and Renewable Energy Technology Deployment
- 63 Sec. 401. Purpose.
- 64 Sec. 402. Definitions.
- 65 Sec. 403. Energy Technology Deployment Goals.
- 66 Sec. 404. Clean Energy Investment Fund.
- 67 Sec. 405. Clean Energy Deployment Administration.
- 68 Sec. 406. Direct Support.
- 69 Sec. 407. Indirect Support.
- 70 Sec. 408. Federal Credit Authority.
- 71 Sec. 409. General Provisions and Conforming Amendments.
- 72 Subtitle B—Nuclear Energy
- 73 Sec. 411 Findings and Sense of Congress.
- 74 Sec. 412. Definitions.
- 75 Sec. 413. Grants for Advanced Fast Reactor and Reprocessing
- 76 Research.
- 77 Sec. 414. Nuclear Fuel Reprocessing Program.
- 78 Sec. 415. Ban on New Thermal Reactors.
- 79 Sec. 416. Nuclear Reactor Construction Incentives.
- 80 Sec. 417 Radiisotope Thermoelectric Generator Material Production.
- 81 Sec. 418. Thorium Fuel Study
- 82 Subtitle B—Renewable Energy
- 83 Sec. 421. Sense of Congress.

6

- 144 economic growth and vitality; United States leadership in
- 145 peaceful cooperation with other nations on challenging
- 146 undertakings in science and technology; science,
- 147 technology, engineering, and math (STEM) education;
- 148 national security, and the advancement of knowledge.
- 149 **SEC. 3. DEFINITIONS.**
- 150 In this Act:
- 151 (1) ADMINISTRATOR.—The term “Administrator”
- 152 means the Administrator of the Environmental Protection
- 153 Agency.
- 154 (2) DEPARTMENT.—The term “Department” means the
- 155 Department of Energy.
- 156 (3) NATIONAL LABORATORY.—The term “National
- 157 Laboratory” has the meaning given the term in section 2 of
- 158 the Energy Policy Act of 2005 (42 U.S.C. 15801).
- 159 (4) SECRETARY.—The term “Secretary” means the
- 160 Secretary of Energy.
- 161 **TITLE I—FUTURE PRODUCTION OF**
- 162 **BIOFUELS**
- 163 **Subtitle A—Biofuels Standards**
- 164 **SEC. 101. DEFINITIONS.**
- 165 Section 211(o)(1) of the Clean Air Act (42 U.S.C. 7545(o))
- 166 is amended to read as follows:
- 167 “(1) DEFINITIONS.—In this section:
- 168 “(A) ADDITIONAL RENEWABLE FUEL.—The term
- 169 ‘additional renewable fuel’ means fuel that is produced
- 170 from renewable biomass and that is used to replace or

171 reduce the quantity of fossil fuel present in home
 172 heating oil or jet fuel.
 173 "(B) ADVANCED BIOFUEL.—
 174 "(i) IN GENERAL.—The term 'advanced biofuel'
 175 means renewable fuel, other than ethanol derived
 176 from corn starch, that has lifecycle greenhouse gas
 177 emissions, as determined by the Administrator,
 178 after notice and opportunity for comment, that are
 179 at least 50 percent less than baseline lifecycle
 180 greenhouse gas emissions.
 181 "(ii) INCLUSIONS.—The types of fuels eligible
 182 for consideration as "advanced biofuel" may include
 183 any of the following:
 184 "(I) Ethanol derived from cellulose,
 185 hemicellulose, or lignin.
 186 "(II) Ethanol derived from sugar or starch
 187 (other than corn starch).
 188 "(III) Ethanol derived from waste material,
 189 including crop residue, other vegetative waste
 190 material, animal waste, and food waste and
 191 yard waste.
 192 "(IV) Biomass-based diesel.
 193 "(V) Biogas (including landfill gas and
 194 sewage waste treatment gas) produced through
 195 the conversion of organic matter from
 196 renewable biomass.

251 consumer, where the mass values for all greenhouse
 252 gases are adjusted to account for their relative global
 253 warming potential.
 254 "(I) RENEWABLE BIOMASS.—The term 'renewable
 255 biomass' means each of the following:
 256 "(i) Planted crops and crop residue harvested
 257 from agricultural land cleared or cultivated at any
 258 time prior to the enactment of this sentence that is
 259 either actively managed or fallow, and nonforested.
 260 "(ii) Planted trees and tree residue from
 261 actively managed tree plantations on non-federal
 262 land cleared at any time prior to enactment of this
 263 sentence, including land belonging to an Indian
 264 tribe or an Indian individual, that is held in trust by
 265 the United States or subject to a restriction against
 266 alienation imposed by the United States.
 267 "(iii) Animal waste material and animal
 268 byproducts.
 269 "(iv) Slash and pre-commercial thinnings that
 270 are from non-federal forestlands, including
 271 forestlands belonging to an Indian tribe or an Indian
 272 individual, that are held in trust by the United
 273 States or subject to a restriction against alienation
 274 imposed by the United States, but not forests or
 275 forestlands that are ecological communities with a
 276 global or State ranking of critically imperiled,
 277 imperiled, or rare pursuant to a State Natural

197 "(VI) Butanol or other alcohols produced
 198 through conversion of organic matter from
 199 renewable biomass.
 200 "(VII) Other fuel derived from cellulose
 201 biomass.
 202 "(VIII) Ethanol or petroleum fuels
 203 (including biodiesel, biogasoline, and aviation
 204 biofuel) derived from algae.
 205 "(C) BASELINE LIFECYCLE GREENHOUSE GAS
 206 EMISSIONS.—The term 'baseline lifecycle greenhouse
 207 gas emissions' means the average lifecycle greenhouse
 208 gas emissions, as determined by the Administrator, after
 209 notice and opportunity for comment, for gasoline or
 210 diesel (whichever is being replaced by the renewable
 211 fuel) sold or distributed as transportation fuel 2005.
 212 "(D) BIOMASS-BASED DIESEL.—The term 'biomass-
 213 based diesel' means renewable fuel that is biodiesel as
 214 defined in section 312(f) of the Energy Policy Act of
 215 1992 (42 U.S.C. 13220(f)) and that has lifecycle
 216 greenhouse gas emissions, as determined by the
 217 Administrator, after notice and opportunity for comment
 218 that are at least 50 percent less than the baseline
 219 lifecycle greenhouse gas emissions. Notwithstanding the
 220 preceding sentence, renewable fuel derived from
 221 coprocessing biomass with a petroleum feedstock shall
 222 be advanced biofuel if it meets the requirements of
 223 subparagraph (B), but is not biomass-based diesel.

278 Heritage Program, old growth forest, or late
 279 successional forest.
 280 "(v) Biomass obtained from the immediate
 281 vicinity of buildings and other areas regularly
 282 occupied by people, or of public infrastructure, at
 283 risk from wildfire.
 284 "(vi) Algae.
 285 "(vii) Separated yard waste or food waste,
 286 including recycled cooking and trap grease.
 287 "(J) RENEWABLE FUEL.—The term 'renewable fuel'
 288 means fuel that is produced from renewable biomass
 289 and that is used to replace or reduce the quantity of
 290 fossil fuel present in a transportation fuel.
 291 "(K) SMALL REFINERY.—The term 'small refinery'
 292 means a refinery for which the average aggregate daily
 293 crude oil throughput for a calendar year (as determined
 294 by dividing the aggregate throughput for the calendar
 295 year by the number of days in the calendar year) does
 296 not exceed 75,000 barrels.
 297 "(L) TRANSPORTATION FUEL.—The term
 298 'transportation fuel' means fuel for use in motor
 299 vehicles, motor vehicle engines, nonroad vehicles, or
 300 nonroad engines (except for ocean-going vessels).".
 301 **SEC. 102. RENEWABLE FUEL STANDARD AMENDMENTS.**
 302 (a) RENEWABLE FUEL PROGRAM.—Paragraph (2) of section
 303 211(e) (42 U.S.C. 7545(e)(2)) of the Clean Air Act is amended
 304 as follows:

224 "(E) CELLULOSIC BIOFUEL.—The term 'cellulosic
 225 biofuel' means renewable fuel derived from any
 226 cellulose, hemicellulose, or lignin that is derived from
 227 renewable biomass and that has lifecycle greenhouse
 228 gas emissions, as determined by the Administrator, that
 229 are at least 60 percent less than the baseline lifecycle
 230 greenhouse gas emissions.
 231 "(F) CONVENTIONAL BIOFUEL.—The term
 232 'conventional biofuel' means renewable fuel that is
 233 ethanol derived from corn starch.
 234 "(G) GREENHOUSE GAS.—The term 'greenhouse
 235 gas' means carbon dioxide, hydrofluorocarbons,
 236 methane, nitrous oxide, perfluorocarbons, sulfur
 237 hexafluoride. The Administrator may include any other
 238 anthropogenically-emitted gas that is determined by the
 239 Administrator, after notice and comment, to contribute
 240 to global warming.
 241 "(H) LIFECYCLE GREENHOUSE GAS EMISSIONS.—
 242 The term 'lifecycle greenhouse gas emissions' means
 243 the aggregate quantity of greenhouse gas emissions
 244 (including direct emissions and significant indirect
 245 emissions such as significant emissions from land use
 246 changes), as determined by the Administrator, related
 247 to the full fuel lifecycle, including all stages of fuel and
 248 feedstock production and distribution, from feedstock
 249 generation or extraction through the distribution and
 250 delivery and use of the finished fuel to the ultimate

305 (1) APPLICABLE VOLUMES OF RENEWABLE FUEL.—
 306 Subparagraph (B) is amended to read as follows:
 307 "(B) APPLICABLE VOLUMES.—
 308 "(i) CALENDAR YEARS AFTER 2013.—
 309 "(I) RENEWABLE FUEL.—For the
 310 purpose of subparagraph (A), the applicable
 311 volume of renewable fuel for the calendar
 312 years 2014 through 2028 shall be
 313 determined in accordance with the following
 314 table:

Calendar year:	Applicable volume of renewable fuel (in billions of gallons):
2014	20.5
2015	22.2
2016	5
2017	24.0
2018	26.0
2019	28.0
2020	30.0
2021	33.0
2022	37.0
2023	42.0
2024	46.0
2025	51.0
2026	57.0
2027	63.0
2028	69.0
	77.0

315 "(II) ADVANCED BIOFUEL.—For the
 316 purpose of subparagraph (A), of the
 317 applicable volume of renewable fuel required
 318 under subclause (I), the applicable volume of
 319 advanced biofuel for the calendar years 2014
 320 through 2028 shall be determined in
 321 accordance with the following table:

Calendar year:	Applicable volume
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of advanced biofuel (in billions of gallons):	
2014	3.75
2015	7.25
2016	10.8
2017	14.3
2018	19.6
2019	25.5
2020	33.0
2021	37.0
2022	42.0
2023	46.0
2024	51.0
2025	57.0
2026	63.0
2027	69.0
2028	77.0

322 “(III) CELLULOSIC BIOFUEL.—For the
323 purpose of subparagraph (A), of the
324 applicable volume of advanced biofuel
325 required under subclause (II), the applicable
326 volume of cellulosic biofuel for the calendar
327 years 2014 through 2028 shall be
328 determined in accordance with the following
329 table:

Applicable volume of cellulosic biofuel (in billions of gallons):	
2014	1.75
2015	3.0
2016	4.25
2017	5.50
2018	7.0
2019	8.5
2020	10.5
2021	13.5
2022	16.0
2023	19.0
2024	22.0
2025	25.0
2026	28.0
2027	32.0
2028	36.0

330 “(IV) ALGAL BIOFUEL.—For the purpose
331 of subparagraph (A), of the applicable

371 the sufficiency of infrastructure to deliver and
372 use renewable fuel;
373 “(V) the impact of the use of renewable
374 fuels on the cost to consumers of
375 transportation fuel and on the cost to
376 transport goods; and
377 “(VI) the impact of the use of renewable
378 fuels on other factors, including job creation,
379 the price and supply of agricultural
380 commodities, rural economic development,
381 and food prices.
382 “The Administrator shall promulgate rules
383 establishing the applicable volumes under this
384 clause no later than 14 months before the first
385 year for which such applicable volume will apply.
386 “(iii) APPLICABLE VOLUME OF ADVANCED
387 BIOFUEL.—For the purpose of making the
388 determinations in clause (ii), for each calendar
389 year, the applicable volume of advanced bio fuel
390 shall be at least the same percentage of the
391 applicable volume of renewable fuel as in calendar
392 year 2028.
393 “(iv) APPLICABLE VOLUME OF CELLULOSIC
394 BIOFUEL.—For the purpose of making the
395 determinations in clause (ii), for each calendar year,
396 the applicable volume of cellulosic biofuel
397 established by the Administrator shall be based on

332 volume of advanced biofuel required under
333 subclause (II), the applicable volume of algal
334 biofuel for the calendar years 2014 through
335 2028 shall be determined in accordance with
336 the following table:

Applicable volume of algal biofuel (in billions of gallons):	
2014	0.1
2015	0.25
2016	0.5
2017	1.0
2018	1.75
2019	3.0
2020	4.25
2021	5.5
2022	7.0
2023	9.0
2024	12.0
2025	16.0
2026	21.0
2027	27.0
2028	34.0

337 “(V) BIOMASS-BASED DIESEL.—For the
338 purpose of subparagraph (A), of the
339 applicable volume of advanced biofuel
340 required under subclause (II), the applicable
341 volume of algal biofuel for the calendar
342 years 2014 through 2017 shall be
343 determined in accordance with the following
344 table:

Applicable volume of biomass diesel (in billions of gallons):	
2014	1.4
2015	1.7
2016	2.1
2028	2.5

398 the assumption that the Administrator will not
399 issue a waiver for such years under paragraph
400 (7)(D).
401 “(v) APPLICABLE VOLUME OF ALGAL
402 BIOFUEL.—For the purpose of making the
403 determinations in clause (ii), for each calendar
404 year, the applicable volume of algal biofuel
405 established by the Administrator shall be based on
406 the assumption that the Administrator will not
407 issue a waiver for such years under paragraph
408 (7)(D).
409 “(vi) APPLICABLE VOLUME OF BIOMASS-
410 BASED DIESEL.—For the purpose of making the
411 determinations in clause (ii), for each calendar
412 year, the applicable volume of biomass-based
413 diesel shall not be less than the applicable volume
414 listed in clause (i)(V) for calendar year 2017.”.
415 “(b) APPLICABLE PERCENTAGES.—Paragraph (3) of section
416 211(o) of the Clean Air Act (42 U.S.C. 7545(o)(3)) is amended
417 as follows:
418 (1) In subparagraph (A), by striking “2021” and
419 inserting “2027.”.
420 (2) In subparagraph (A), by striking “transportation
421 fuel, biomass-based diesel, and cellulosic biofuel” and
422 inserting “transportation fuel, biomass-based diesel,
423 cellulosic biofuel, and algal biofuel.”.

345 “(ii) OTHER CALENDAR YEARS.—For the
346 purposes of subparagraph (A), the applicable
347 volumes of each fuel specified in the tables in
348 clause (i) for calendar years after the calendar
349 years specified in the tables shall be determined
350 by the Administrator, in coordination with the
351 Secretary of Energy and the Secretary of
352 Agriculture, based on a review of the
353 implementation of the program during calendar
354 years specified in the tables, and an analysis of—
355 “(I) the impact of the production and
356 use of renewable fuels on the environment,
357 including air quality, climate change,
358 conversion of wet lands, eco-systems, wildlife
359 habitat, water quality, and water supply;
360 “(II) the impact of renewable fuels on
361 the energy security of the United States;
362 “(III) the expected annual rate of future
363 commercial production of renewable fuels,
364 including advanced biofuels in each category
365 (cellulosic biofuel, algal biofuel, and biomass-
366 based diesel);
367 “(IV) the impact of renewable fuels on
368 the infrastructure of the United States,
369 including deliverability of materials, goods,
370 and products other than renewable fuel, and

424 (3) In subparagraph (B), by striking “2021” and
425 inserting “2027” in clause (i).
426 “(c) CREDITS FOR ADDITIONAL RENEWABLE FUEL.—
427 Paragraph (5)(e) of section 211(o) (42 U.S.C. 7545(o)(5)) of
428 the Clean Air Act is amended to read as follows:
429 “(E) CREDITS FOR ADDITIONAL RENEWABLE FUEL.—
430 The Administrator may issue regulations providing (i) for
431 the generation of an appropriate amount of credits by any
432 person that refines, blends, or imports advanced biofuels
433 specified by the Administrator and (ii) for the use of such
434 credits by the generator, or the transfer of all or a portion of
435 the credits to another person, for the purpose of complying
436 with paragraph (2).”.
437 **SEC. 103. STUDY OF THE IMPACT OF RENEWABLE FUEL**
438 **STANDARD.**
439 “(a) IN GENERAL.—The Secretary of Energy, in consultation
440 with the Secretary of Agriculture and the Administrator of the
441 Environmental Protection Agency, shall enter into an
442 arrangement with the National Academy of Sciences under
443 which the Academy shall conduct a study to assess the impact
444 of the requirements described in section 211(o) of the Clean Air
445 Act on each industry relating to the production of feed grains,
446 livestock, food, forest products, algae, and energy.
447 “(b) PARTICIPATION.—In conducting the study under this
448 section, the National Academy of Sciences shall seek the
449 participation, and consider the input, of—
450 (1) producers of feed grains;

451 (2) producers of livestock, poultry, and pork products;
 452 (3) producers of food and food products;
 453 (4) producers of energy;
 454 (5) individuals and entities interested in issues relating
 455 to conservation, the environment, and nutrition;
 456 (6) users and consumer of renewable fuels;
 457 (7) producers and users of biomass feedstocks;
 458 (8) researchers and producers of algae for biofuels;
 459 and
 460 (9) land grant universities.
 461 (c) CONSIDERATIONS.—In conducting the study, the
 462 National Academy of Sciences shall consider—
 463 (1) the likely impact on domestic animal agriculture
 464 feedstocks that, in any crop year, are significantly below
 465 current projections;
 466 (2) policy options to alleviate the impact on domestic
 467 animal agriculture feedstocks that are significantly below
 468 current projections; and
 469 (3) policy options to maintain regional agricultural and
 470 silvicultural capability.
 471 (d) COMPONENTS.—The study shall include—
 472 (1) a description of the conditions under which the
 473 requirements described in section 211(o) of the Clean Air
 474 Act should be suspended or reduced to prevent adverse
 475 impacts to domestic animal agriculture feedstocks described
 476 in subsection (c)(2) or regional agricultural and silvicultural
 477 capability described in subsection (c)(3); and

532 (b) STUDY.—The Administrator of the Environmental
 533 Protection Agency shall conduct a study on the feasibility of
 534 issuing credits under the program established under section
 535 211(o) of the Clean Air Act to electric vehicles powered by
 536 electricity produced from renewable energy sources.
 537 (c) REPORT.—Not later than 18 months after the date of
 538 enactment of this Act, the Administrator shall submit to the
 539 Committee on Energy and Natural Resources of the United
 540 States Senate and the Committee on Energy and Commerce of
 541 the United States House of Representatives a report that
 542 describes the results of the study, including a description of —
 543 (1) existing programs and studies on the use of
 544 renewable electricity as a means of powering electric
 545 vehicles; and
 546 (2) alternatives for —
 547 (A) designing a pilot program to determine the
 548 feasibility of using renewable electricity to power
 549 electric vehicles as an adjunct to a renewable fuels
 550 mandate;
 551 (B) allowing the use, under the pilot program
 552 designed under subparagraph (A), of electricity
 553 generated from nuclear energy as an additional source
 554 of supply;
 555 (C) identifying the source of electricity used to
 556 power electric vehicles; and

478 (2) recommendations for the means by which the
 479 Federal Government could prevent or minimize adverse
 480 economic hardships and impacts.
 481 (e) DEADLINE FOR COMPLETION OF STUDY.—Not later than
 482 18 months after the date of enactment of this Act, the
 483 Secretary shall submit to Congress a report that describes the
 484 results of the study under this section.
 485 **SEC. 104. ENVIRONMENTAL AND RESOURCE**
 486 **CONSERVATION IMPACTS.**
 487 (a) IN GENERAL.—Not later than 3 years after the
 488 enactment of this section and every 3 years thereafter, the
 489 Administrator of the Environmental Protection Agency, in
 490 consultation with the Secretary of Agriculture and the Secretary
 491 of Energy, shall assess and report to Congress on the impacts
 492 to date and likely further impacts of the requirements of section
 493 211(o) of the Clean Air Act on the following:
 494 (1) Environmental issues, including air quality, effects
 495 on hypoxia, pesticides, sediment, nutrient and pathogen
 496 levels in waters, acreage and function of waters, and soil
 497 environmental quality.
 498 (2) Resource conservation issues, including soil
 499 conservation, water availability, and ecosystem health and
 500 biodiversity, including impacts on forests, grasslands, and
 501 wetlands.
 502 (3) The growth and use of cultivated invasive or
 503 noxious plants and their impacts on the environment and
 504 agriculture.

557 (D) equating specific quantities of electricity to
 558 quantities of renewable fuel under section 211(o) of
 559 the Clean Air Act.
 560 **SEC. 106. GRANTS FOR PRODUCTION OF ADVANCED**
 561 **BIOFUELS.**
 562 (a) IN GENERAL.—The Secretary of Energy shall establish a
 563 grant program to encourage the research, development, and
 564 production of advanced biofuels.
 565 (b) REQUIREMENTS AND PRIORITY.—In making grants
 566 under this section, the Secretary—
 567 (1) shall make awards to the proposals for advanced
 568 biofuels with the greatest reduction in lifecycle greenhouse
 569 gas emissions compared to the comparable motor vehicle
 570 fuel lifecycle emissions during calendar year 2014;
 571 (2) shall make awards to proposals for research in
 572 technology for algae-based biofuels, including but not
 573 limited to—
 574 (A) genetically-modified algae;
 575 (B) enhanced algae growth and production
 576 techniques;
 577 (C) production of petroleum products from algae,
 578 genetically modified or otherwise; and
 579 (3) shall not make an award to a project that does not
 580 achieve at least 80 percent reduction in such lifecycle
 581 greenhouse gas emissions.

505 In advance of preparing the report required by this subsection,
 506 the Administrator may seek the views of the National Academy
 507 of Sciences or another appropriate independent research
 508 institution. The report shall include the annual volume of
 509 imported renewable fuels and feedstocks for renewable fuels,
 510 and the environmental impacts outside the United States of
 511 producing such fuels and feedstocks. The report required by
 512 this subsection shall include recommendations for actions to
 513 address any adverse impacts found.
 514 (b) EFFECT ON AIR QUALITY AND OTHER ENVIRONMENTAL
 515 REQUIREMENTS.—Except as provided in section 211(o)(13) of
 516 the Clean Air Act, nothing in the amendments made by this title
 517 to section 211(o) of the Clean Air Act shall be construed as
 518 superseding, or limiting, any more environmentally protective
 519 requirement under the Clean Air Act, or under any other
 520 provision of State or Federal law or regulation, including any
 521 environmental law or regulation.
 522 **SEC. 105. STUDY OF CREDITS FOR USE OF RENEWABLE**
 523 **ELECTRICITY IN ELECTRIC VEHICLES**
 524 (a) DEFINITION OF ELECTRIC VEHICLE.—In this section, the
 525 term "electric vehicle" means an electric motor vehicle (as
 526 defined in section 601 of the Energy Policy Act of 1992 (42
 527 U.S.C. 13271)) for which the rechargeable storage battery—
 528 (1) Receives a charge directly from a source of electric
 529 current that is external to the vehicle; and
 530 (2) Provides a minimum of 80 percent of the motive
 531 power of the vehicle.

582 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
 583 authorized to be appropriated to carry out this section
 584 \$750,000,000 for the period of fiscal years 2015 through 2019.
 585 **SEC. 107. EFFECTIVE DATE, SAVINGS PROVISION, AND**
 586 **TRANSITION RULES.**
 587 (a) TRANSITION RULES.—(1) For calendar year 2014,
 588 transportation fuel sold or introduced into commerce in the
 589 United States (except in noncontiguous States or territories),
 590 that is produced from facilities that commence construction
 591 after the date of enactment of this Act shall be treated as
 592 renewable fuel within the meaning of section 211(o) of the
 593 Clean Air Act only if it achieves at least a 20 percent reduction
 594 in lifecycle greenhouse gas emissions compared to baseline
 595 lifecycle greenhouse gas emissions. For calendar years 2014
 596 and 2014, any ethanol plant that is fired with natural gas,
 597 biomass, or any combination thereof is deemed to be in
 598 compliance with such 20 percent reduction requirement and
 599 with the 20 percent reduction requirement of section 211(o)(1)
 600 of the Clean Air Act. The terms used in this subsection shall
 601 have the same meaning as provided in the amendment made
 602 by this Act to section 211(o) of the Clean Air Act.
 603 (2) Until January 1, 2015, the Administrator of the
 604 Environmental Protection Agency shall implement section
 605 211(o) of the Clean Air Act and the rules promulgated under
 606 that section in accordance with the provisions of that section as
 607 in effect before the enactment of this Act and in accordance
 608 with the rules promulgated before the enactment of this Act.

609 The Administrator is authorized to take such other actions as
610 may be necessary to carry out this paragraph notwithstanding
611 any other provision of law.

612 (b) EFFECTIVE DATE.—The amendments made by this title
613 to section 211(o) of the Clean Air Act shall take immediately
614 upon enactment, except that the Administrator shall
615 promulgate regulations to carry out such amendments not later
616 than 1 year after the enactment of this Act.

**Subtitle B—Biofuels Research and
Development**

SEC. 111. ALGAL BIOFUEL.

620 (a) ALGAL BIOFUEL STUDY.—Not later than 180 days after
621 the date of enactment of this Act, the Secretary, in consultation
622 with the Administrator of the Environmental Protection Agency,
623 shall submit to Congress a report on the progress of the
624 research and development that is being conducted on the use
625 of algae as a feedstock for the production of biofuels.

626 (b) CONTENTS.—The report shall identify continuing
627 research and development challenges and any regulatory or
628 other barriers found by the Secretary that hinder the use of this
629 resource, as well as recommendations on how to encourage
630 and further its development as a viable transportation fuel.

631 (c) MATERIAL FOR THE ESTABLISHMENT OF STANDARDS.—
632 The Director of the National Institute of Standards and
633 Technology, in consultation with the Secretary, shall make
634 publicly available the physical property data and

635 characterization of algal biofuels and other biofuels as
636 appropriate.

SEC. 112. BIODIESEL.

638 (a) BIODIESEL STUDY.—Not later than 180 days after the
639 date of enactment of this Act, the Secretary, in consultation
640 with the Administrator of the Environmental Protection Agency,
641 shall submit to Congress a report on any research and
642 development challenges inherent in increasing the proportion of
643 diesel fuel sold in the United States that is biodiesel.

644 (b) MATERIAL FOR THE ESTABLISHMENT OF STANDARDS.—
645 The Director of the National Institute of Standards and
646 Technology, in consultation with the Secretary, shall make
647 publicly available the physical property data and
648 characterization of biodiesel and other biofuels as appropriate.

SEC. 113. BIOGAS.

650 Not later than 180 days after the date of enactment of this
651 Act, the Secretary, in consultation with the Administrator of the
652 Environmental Protection Agency, shall submit to Congress a
653 report on any research and developmental challenges inherent
654 in increasing the amount of transportation fuels sold in the
655 United States that are fuel with biogas or a blend of biogas and
656 natural gas.

SEC. 114. WASTE BIOMASS GRANT PROGRAM.

658 (a) DEFINITION.—In this section:

659 (1) BIOMASS.—The term "biomass" shall have the
660 meaning given the term "renewable biomass" in section

661 211(o)(1) of the Clean Air Act (42 U.S.C. 7545(o)) (as
662 added by section 101 of this Act).

663 (2) WASTE BIOMASS.—the excess waste by-product
664 that results from the production of biofuels using biomass.
665 (b) STUDY.—Not later than 90 days after the date of
666 enactment of this Act, the Secretary shall submit to the
667 Committee on Science and Technology of the House of
668 Representatives and the Committee on Energy and Natural
669 Resources of the Senate, a report on the progress of the
670 research and development that is being conducted on the use
671 of waste biomass for energy generation.

672 (1) CONTENTS.—The report shall identify continuing
673 research and development challenges and any regulatory or
674 other barriers found by the Secretary that hinder the use of
675 this resource, as well as recommendations on how to
676 encourage and further its development as a viable energy
677 source.

678 (2) RECOMMENDATIONS.—The Secretary shall also
679 include recommendations on how waste biomass may be
680 utilized as an energy source in the near term.

681 (c) GRANT PROGRAM.—

682 (1) IN GENERAL.—The Secretary shall provide grants
683 to eligible entities for research, development,
684 demonstration, and commercial application of waste
685 biomass energy generation technologies.

686 (2) ELIGIBILITY.—To be eligible to receive a grant
687 under this section, an entity shall—

688 (A) (i) be an institution of higher education (as
689 defined in section 2 of the Energy Policy Act of 2005
690 (42 U.S.C. 15801)), including tribally controlled
691 colleges or universities, located in a State described in
692 subsection (a); or

693 (ii) be a consortium including at least 1 such
694 institution of higher education, industry, State
695 agencies, Indian tribal agencies, National Laboratories,
696 or local government agencies located in the State; and

697 (B) have proven experience and capabilities with
698 relevant technologies.

699 (3) AUTHORIZATION OF APPROPRIATIONS.—There are
700 authorized to be appropriated to the Secretary to carry out
701 this section \$50,000,000 for each of fiscal years 2015
702 through 2018.

**SEC. 115. GRANTS FOR BIOFUEL PRODUCTION
RESEARCH AND DEVELOPMENT IN CERTAIN
STATES.**

706 (a) IN GENERAL.—The Secretary shall provide grants to
707 eligible entities for research, development, demonstration, and
708 commercial application of biofuel production technologies in
709 States with low rates of advanced biofuel production, including
710 low rates of production of cellulosic biomass ethanol, as
711 determined by the Secretary.

712 (b) ELIGIBILITY.—To be eligible to receive a grant under
713 this section, an entity shall—

714 (1) (A) be an institution of higher education (as
715 defined in section 2 of the Energy Policy Act of 2005 (42
716 U.S.C. 15801)), including tribally controlled colleges or
717 universities, located in a State described in subsection (a);
718 or

719 (B) be a consortium including at least 1 such
720 institution of higher education, industry, State
721 agencies, Indian tribal agencies, National Laboratories,
722 or local government agencies located in the State; and

723 (2) have proven experience and capabilities with
724 relevant technologies.

725 (c) AUTHORIZATION OF APPROPRIATIONS.—There are
726 authorized to be appropriated to the Secretary to carry out this
727 section \$50,000,000 for each of fiscal years 2015 through
728 2018.

**SEC. 116 CELLULOSIC ETHANOL AND ALGAL BIOFUELS
RESEARCH.**

731 (a) DEFINITION OF ELIGIBLE ENTITY.—In this section, the
732 term "eligible entity" means—

733 (1) an 1890 Institution (as defined in section 2 of the
734 Agricultural Research, Extension, and Education Reform Act
735 of 1998 (7 U.S.C. 7061));

736 (2) a part B institution (as defined in section 332 of the
737 Higher Education Act of 1965 (20 U.S.C.1061)) (commonly
738 referred to as "Historically Black Colleges and Universities");

739 (3) a tribal college or university (as defined in section
740 316(b) of the Higher Education Act of 1965 (20 U.S.C.
741 1059c(b)); or

742 (4) a Hispanic-serving institution (as defined in section
743 502(a) of the Higher Education Act of 1965 (20 U.S.C.
744 1101a(a)).

745 (b) GRANTS.—The Secretary shall make cellulosic ethanol
746 and algal biofuels research and development grants to 15
747 eligible entities selected by the Secretary to receive a grant
748 under this section through a peer-reviewed competitive
749 process.

750 (c) COLLABORATION.—An eligible entity that is selected to
751 receive a grant under subsection (b) shall collaborate with 1 of
752 the Bioenergy Research Centers of the Office of Science of the
753 Department.

754 (d) AUTHORIZATION OF APPROPRIATIONS.—There is
755 authorized to be appropriated to the Secretary to make grants
756 described in subsection (b) \$85,000,000 for fiscal year 2015, to
757 remain available until expended.

**SEC. 117. BIOENERGY RESEARCH AND DEVELOPMENT,
AUTHORIZATION OF APPROPRIATION**

760 Section 931 of the Energy Policy Act of 2005 (42 U.S.C.
761 16231) is amended—

762 (1) in subsection (b)—

763 (A) in paragraph (3), by striking "and" at the
764 end;

765 (B) in paragraph (4), by striking the period at the
766 end and inserting ";"; and
767 (C) by adding at the end the following:
768 "(5) \$2,500,000,000 for fiscal year 2015;
769 "(6) \$2,500,000,000 for fiscal year 2016;
770 "(7) \$2,000,000,000 for fiscal year 2017;
771 and
772 "(8) \$2,000,000,000 for fiscal year 2018."
773 (2) in subsection (c)—
774 (A) in paragraph(3), by striking the "and" at the
775 end;
776 (B) in paragraph (4), by striking the period at the
777 end and inserting ";"; and
778 (C) by adding at the end the following:
779 "(5) \$650,000,000 for fiscal year 2015;
780 "(6) \$650,000,000 for fiscal year 2016;
781 "(7) \$500,000,000 for fiscal year 2017; and
782 "(8) \$420,000,000 for fiscal year 2018."

783 **TITLE II—Electrifying the Future of**
784 **Transportation**
785 **Subtitle A—Transportation**
786 **Electrification Technologies**

787 **SEC. 201. DEFINITIONS.**

788 In this title:
789 (1) BATTERY.—The term "battery" means an
790 electrochemical energy storage system powered directly by
791 electrical current.

846 (ii) fully or partially by an electric motor
847 powered by a fuel cell, a battery, or an off-board
848 source of electricity; and
849 (B) that is not a motor vehicle or a vehicle used
850 solely for competition.
851 (9) PLUG-IN ELECTRIC DRIVE VEHICLE.—The term
852 "plug-in electric drive vehicle" means a vehicle that—
853 (A) draws motive power from a battery with a
854 capacity of at least 4 kilowatt-hours;
855 (B) can be recharged from an external source of
856 electricity for motive power; and
857 (C) is a light-, medium-, or heavy-duty motor
858 vehicle or nonroad vehicle (as those terms are defined
859 in section 216 of the Clean Air Act (42 U.S.C. 7550)).
860 (10) QUALIFIED ELECTRIC TRANSPORTATION
861 PROJECT.—The term "qualified electric transportation
862 project" means an electric transportation technology project
863 that would significantly reduce emissions of criteria
864 pollutants, greenhouse gas emissions, and petroleum,
865 including—
866 (A) shipside or shoreside electrification for
867 vessels;
868 (B) truck-stop electrification;
869 (C) electric truck refrigeration units;
870 (D) battery powered auxiliary power units for
871 trucks;
872 (E) electric airport ground support equipment;

792 (2) ELECTRIC TRANSPORTATION TECHNOLOGY.—The
793 term "electric transportation" technology" means—
794 (A) technology used in vehicles that use an
795 electric motor for all or part of the motive power of the
796 vehicles, including battery electric, hybrid electric,
797 plug-in hybrid electric, fuel cell, and plug-in fuel cell
798 vehicles, or rail transportation; or
799 (B) equipment relating to transportation or
800 mobile sources of air pollution that use an electric
801 motor to replace an internal combustion engine for all
802 or part of the work of the equipment, including—
803 (i) corded electric equipment linked to
804 transportation or mobile sources of air pollution;
805 and
806 (ii) electrification technologies at airports,
807 ports, truck stops, and material-handling
808 facilities.
809 (3) ELECTRIC VEHICLE.—The term "electric vehicle"
810 means an electric motor vehicle (as defined in section 601
811 of the Energy Policy Act of 1992 (42 U.S.C. 13271)) for
812 which the rechargeable storage battery—
813 (A) Receives a charge directly from a source of
814 electric current that is external to the vehicle; and
815 (B) Provides a minimum of 80 percent of the
816 motiv power of the vehicle.
817 (4) FUEL CELL ELECTRIC VEHICLE.—The term "fuel cell
818 electric vehicle" means an on-road or nonroad vehicle that

873 (F) electric material and cargo handling
874 equipment;
875 (G) electric or dual-mode electric rail;
876 (H) any distribution upgrades needed to supply
877 electricity to the project; and
878 (I) any ancillary infrastructure, including panel
879 upgrades, battery chargers, in-situ transformers, and
880 trenching.
881 **SEC. 202 CONTINUING PLUG-IN ELECTRIC DRIVE**
882 **VEHICLE PROGRAM.**
883 Section 131(b) of the Energy Independence and Security
884 Act of 2007 (42 U.S.C. 17011(b)) is amended as follows:
885 (1) In Paragraph (6) by striking "\$90,000,000" and
886 inserting "\$750,000,000";
887 (2) In Paragraph (6) by striking "2012" and inserting
888 "2017"; and
889 (3) In Paragraph (6) by striking "of which not less than
890 1/3 of the total amount appropriated shall be available each
891 fiscal year to make grants to local and municipal
892 governments".
893 **SEC. 203 CONTINUING NEAR-TERM TRANSPORTATION**
894 **SECTOR ELECTRIFICATION PROGRAM.**
895 Section 131(c) of the Energy Independence and Security
896 Act of 2007 (42 U.S.C. 17011(c)) is amended as follows:
897 (1) In Paragraph (4) by striking "\$95,000,000" and
898 inserting "\$450,000,000"; and

819 uses a fuel cell (as defined in section 601 of the Energy
820 Policy Act of 1992 (42 U.S.C. 13271) and in section 803 of
821 the Spark M. Matsunaga Hydrogen Act of 2005 (42 U.S.C.
822 16152)).
823 (5) HYBRID ELECTRIC VEHICLE.—The term "hybrid
824 electric vehicle" means a new qualified hybrid motor vehicle
825 (as defined in section 308(d)(3) of the Internal Revenue
826 Code of 1986).
827 (6) MEDIUM- OR HEAVY-DUTY ELECTRIC VEHICLE.—
828 The term "medium- or heavy-duty electric vehicle" means
829 an electric, hybrid electric, or plug-in hybrid electric vehicle
830 with a gross vehicle weight of more than 8,501 pounds.
831 (7) NEIGHBORHOOD ELECTRIC VEHICLE.—The term
832 "neighborhood electric vehicle" means a 4-wheeled on-road
833 or nonroad vehicle that—
834 (A) has a top attainable speed in 1 mile of more
835 than 20 mph and not more than 25 mph on a paved
836 level surface; and
837 (B) is propelled by an electric motor and on-
838 board, rechargeable energy storage system that is
839 rechargeable using an off-board source of electricity.
840 (8) NONROAD VEHICLE.—The term "nonroad vehicle"
841 means a vehicle—
842 (A) powered—
843 (i) by a nonroad engine, as that term is
844 defined in section 216 of the Clean Air Act (42
845 U.S.C. 7550); or

899 (2) In Paragraph (6) by striking "2013" and inserting
900 "2017".
901 **SEC. 204 ELECTRIC DRIVE IN ENERGY POLICY ACT OF**
902 **1992.**
903 Section 508(f) of the Energy Policy Act of 1992 (42
904 U.S.C. 13258(f)) is amended to read as follows:
905 "(f) AUTHORIZATION OF APPROPRIATIONS.—There are
906 authorized to be appropriated such sums as are necessary to
907 carry out this section for each of fiscal years 2008 through
908 2017."
909 **SEC. 205 ADVANCED FUEL CELL AND BATTERY LOAN**
910 **GUARANTEE PROGRAM**
911 (a) ESTABLISHMENT OF PROGRAM.—The Secretary shall
912 establish a program to provide guarantees of loans by private
913 institutions for the construction of facilities for the manufacture
914 of advanced vehicle fuel cells, high-density hydrogen storage,
915 advanced vehicle batteries and battery systems that are
916 developed and produced in the United States, including
917 advanced lithium ion batteries and hybrid electric system and
918 component manufacturers and software designers.
919 (b) REQUIREMENTS.—The Secretary may provide a loan
920 guarantee under subsection (a) to an applicant if—
921 (1) without a loan guarantee, credit is not available to
922 the applicant under reasonable terms or conditions sufficient
923 to finance the construction of a facility described in
924 subsection (a);

925 (2) the prospective earning power of the applicant and
 926 the character and value of the security pledged provide a
 927 reasonable assurance of repayment of the loan to be
 928 guaranteed in accordance with the terms of the loan; and
 929 (3) the loan bears interest at a rate determined by the
 930 Secretary to be reasonable, taking into account the current
 931 average yield on outstanding obligations of the United
 932 States with remaining periods of maturity comparable to the
 933 maturity of the loan.
 934 (c) CRITERIA.—In selecting recipients of loan guarantees
 935 from among applicants, the Secretary shall give preference to
 936 proposals that—
 937 (1) meet all applicant Federal and State permitting
 938 requirements;
 939 (2) are most likely to be successful; and
 940 (3) are located in local markets that have the greatest
 941 need for the facility.
 942 (d) MATURITY.—A loan guaranteed under subsection (a)
 943 shall have a maturity of not more than 20 years.
 944 (e) TERMS AND CONDITIONS.—The loan agreement for a
 945 loan guaranteed under subsection (a) shall provide that no
 946 provision of the loan agreement may be amended or waived
 947 without the consent of the Secretary.
 948 (f) ASSURANCE OF REPAYMENT.—The Secretary shall
 949 require that an applicant for a loan guarantee under subsection
 950 (a) provide an assurance of repayment in the form of a
 951 performance bond, insurance, collateral, or other means

1005 (B) installed for the purpose of meeting the
 1006 performance requirements of electric drive vehicles.
 1007 (5) ELECTRIC DRIVE VEHICLES MANUFACTURING
 1008 FACILITY.—The Secretary shall provide facility funding
 1009 awards under this section to automobile manufacturers and
 1010 component suppliers to a not more than 45 percent of the
 1011 cost of—
 1012 (A) reequipping, expanding, or establishing a
 1013 manufacturing facility in the United States to
 1014 produce—
 1015 (i) qualifying electric drive vehicles; or
 1016 (ii) qualifying components; and
 1017 (B) engineering integration performed in the
 1018 United States of qualifying vehicles and qualifying
 1019 components.
 1020 (b) PERIOD OF AVAILABILITY.—An award under subsection
 1021 (c) shall apply to—
 1022 (1) Facilities and equipment placed in service before
 1023 December 30, 2024; and
 1024 (2) Engineering integration costs incurred during the
 1025 period beginning on the date of enacted of this Act and
 1026 ending on December 30, 2024
 1027 (c) DIRECT LOAN PROGRAM.—
 1028 (1) IN GENERAL.—Not later than 1 year after the date
 1029 of enactment of this Act, and subject to the availability of
 1030 appropriated funds, the Secretary shall carry out a program
 1031 to provide a total of not more than \$65,000,000,000 in

952 acceptable to the Secretary in an amount equal to not less than
 953 20 percent of the amount of the loan.
 954 (g) GUARANTEE FEE.—The recipient of a loan guarantee
 955 under subsection (a) shall pay the Secretary an amount
 956 determined by the Secretary to be sufficient to cover the
 957 administrative costs of the Secretary relating to the loan
 958 guarantee.
 959 (h) FULL FAITH AND CREDIT.—The full faith and credit of
 960 the United States is pledged to the payment of all guarantees
 961 made under this section. Any such guarantee made by the
 962 Secretary shall be conclusive evidence of the eligibility of the
 963 loan for the guarantee with respect to principal and interest.
 964 The validity of the guarantee shall be incontestable in the hands
 965 of a holder of the guaranteed loan.
 966 (i) REPORTS.—Until each guaranteed loan under this section
 967 has been repaid in full, the Secretary shall annually submit to
 968 Congress a report on the activities of the Secretary under this
 969 section.
 970 (j) AUTHORIZATION OF APPROPRIATIONS.—There are
 971 authorized to be appropriated such sums as are necessary to
 972 carry out this section.
 973 (k) TERMINATION OF AUTHORITY.—The authority of the
 974 Secretary to issue a loan guarantee under subsection (a)
 975 terminates on the date that is 10 years after the date of
 976 enactment of this Act.
 977 **SEC. 206 ELECTRIC VEHICLE MANUFACTURING**
 978 **INCENTIVE PROGRAM.**

1032 loans to eligible individuals and entities (as determined by
 1033 the Secretary) for the costs of activities described in
 1034 subsection (b).
 1035 (2) APPLICATION.—An applicant for a loan under this
 1036 subsection shall submit to the Secretary an application at
 1037 such time, in such manner, and containing such information
 1038 as the Secretary may require, including a written assurance
 1039 that—
 1040 (A) all laborers and mechanics employed by
 1041 contractors or subcontractors during construction,
 1042 alteration, or repair that is financed, in whole or in
 1043 part, by a loan under this section shall be paid wages
 1044 at rates not less than those prevailing on similar
 1045 construction in the locality, as determined by the
 1046 Secretary of Labor in accordance with section 3141-
 1047 3144, 3146, and 3147 of title 40, United States Code;
 1048 and
 1049 (B) the Secretary of Labor shall, with respect to
 1050 the labor standards described in this paragraph, have
 1051 the authority and functions set forth in Reorganization
 1052 Plan Numbered 14 of 1950 (5 U.S.C. App.) and section
 1053 3145 of title 40, United States Code.
 1054 (3) SELECTION OF ELIGIBLE PROJECTS.—The
 1055 Secretary shall select eligible projects to receive loans under
 1056 this subsection in cases in which, as determined by the
 1057 Secretary, the award recipient—

979 (a) DEFINITIONS.—In this section:
 980 (1) ELECTRIC DRIVE VEHICLE.—The term "electric
 981 drive vehicle" means either—
 982 (A) an "electric vehicle" as defined in section 201
 983 of this Title;
 984 (B) a "fuel cell electric vehicle" as defined in
 985 section 201 of this Title; or
 986 (C) a "plug-in electric drive vehicle" as defined in
 987 section 201 of this Title.
 988 (2) ENERGY ECONOMY.—The term "energy economy"
 989 means the equivalent measure of fuel economy for an
 990 electric drive vehicle, as measured in miles per gallon
 991 gasoline equivalent.
 992 (3) ENGINEERING INTEGRATION COSTS.—The term
 993 "engineering integration costs" includes the cost of
 994 engineering tasks relating to—
 995 (A) incorporating qualifying components into the
 996 design of electric drive vehicles; and
 997 (B) designing tooling and equipment and
 998 developing manufacturing processes and material
 999 suppliers for production facilities that produce
 1000 qualifying components or electric drive vehicles.
 1001 (4) QUALIFYING COMPONENTS.—The term "qualifying
 1002 components" means components that the Secretary
 1003 determines to be —
 1004 (A) designed for electric drive vehicles; and

1058 (A) is financially viable without the receipt of
 1059 additional Federal funding associated with the
 1060 proposed project;
 1061 (B) will provide sufficient information to the
 1062 Secretary for the Secretary to ensure that the
 1063 qualified investment is expended efficiently and
 1064 effectively; and
 1065 (C) has met such other criteria as may be
 1066 established and published by the Secretary.
 1067 (4) RATES, TERMS, AND REPAYMENT OF LOANS.—A
 1068 loan provided under this subsection—
 1069 (A) shall have an interest rate that, as of
 1070 the date on which the loan is made, is equal to the
 1071 cost of funds to the Department of the Treasury for
 1072 obligations of comparable maturity;
 1073 (B) shall have a term equal to the lesser of—
 1074 (i) the projected life, in years, of the
 1075 eligible project to be carried out using funds from
 1076 the loan, as determined by the Secretary; and
 1077 (ii) 25 years;
 1078 (C) may be subject to a deferral in repayment for
 1079 not more than 5 years after the date on which the
 1080 eligible project carried out using funds from the loan
 1081 first begins operations, as determined by the
 1082 Secretary; and
 1083 (D) shall be made by the Federal Financing Bank.

1084 (d) IMPROVEMENT.—The Secretary shall issue regulations
 1085 that require that, in order for an automobile manufacturer to be
 1086 eligible for an award or loan under this section during a
 1087 particular year, the adjusted average fuel and energy economy
 1088 of the manufacturer for light duty vehicles produced by the
 1089 manufacturer during the most recent year for which data are
 1090 available shall not be less than the average fuel and energy
 1091 economy for all light duty vehicles of the manufacturer for
 1092 model year 2013. In order to determine fuel and energy
 1093 economy baselines for eligibility of a new manufacturer or a
 1094 manufacturer that has not produced previously equivalent
 1095 vehicles, the Secretary may substitute industry averages.
 1096 (e) FEES.—Administrative costs shall be no more than
 1097 \$100,000 or 10 basis point of the loan.
 1098 (f) PRIORITY.—The Secretary shall, in making awards or
 1099 loans to those manufacturers that have existing facilities, give
 1100 priority to those facilities that are oldest or have been in
 1101 existence for at least 20 years. Such facilities can currently be
 1102 sitting idle.
 1103 (g) SET ASIDE FOR SMALL AUTOMOBILE MANUFACTURING
 1104 AND COMPONENT SUPPLIERS.—
 1105 (1) DEFINITION OF COVERED FIRM.—in this
 1106 subsection, the term "covered firm" means a firm that—
 1107 (A) employs less than 500 individuals; and
 1108 (B) manufactures automobiles or components of
 1109 automobiles.

1162 (3) a "plug-in electric drive vehicle" as defined in
 1163 section 201 of this Title.
 1164 **SEC. 222. FINDINGS.**
 1165 The Congress finds the following:
 1166 (1) As part of a transition toward increased energy
 1167 security and independence, traditional vehicles where
 1168 motive power is supplied by combustion of fossil fuels must
 1169 be phased out in favor of electric drive vehicles.
 1170 (2) Electric drive vehicles are much more efficient than
 1171 combustion vehicles in terms of fuel economy, use of fossil
 1172 fuels, and reduced generation of greenhouse gasses and
 1173 other pollutants.
 1174 (3) Advances in current technology are finally allowing
 1175 electric drive vehicles a competitive edge against
 1176 combustion vehicles in terms of performance and range.
 1177 (4) Significant reductions in the consumption of fossil
 1178 fuels and production of greenhouse gasses could be
 1179 achieved if a fraction of the vehicles on the road in the
 1180 United States were to become electric drive vehicles.
 1181 (5) One of the final hindrances in widespread adoption
 1182 of electric vehicles is availability of options to the consumer,
 1183 as well as a network of charging stations across the
 1184 country.
 1185 **SEC. 223. ELECTRIC VEHICLE MANUFACTURING**
 1186 **STANDARDS.**
 1187 (a) REGULATIONS.—

1110 (2) SET ASIDE.—Of the amount of funds that are used
 1111 to provide awards for each fiscal year under subsection (b),
 1112 the Secretary shall use not less than 10 percent to provide
 1113 awards to covered firms or consortia led by a covered firm.
 1114 (h) AUTHORIZATION OF APPROPRIATIONS.—There are
 1115 authorized to be appropriated such sums as are necessary to
 1116 carry out this section for each of fiscal years 2014 through
 1117 2020.
 1118 **Subtitle B—Federal Vehicle Fleets**
 1119 **SEC. 211. FEDERAL FLEET CONSERVATION**
 1120 **REQUIREMENTS.**
 1121 Section 400FF of title III the Energy Policy and Conservation
 1122 Act (42 U.S.C. 6374e) is amended as follows:
 1123 (1) In subsection (a) paragraph (2).—
 1124 (A) by striking "at least a 20 percent reduction"
 1125 and inserting "at least a 35 percent reduction"; and
 1126 (B) by striking "a 10 percent increase" and
 1127 inserting "a 15 percent increase".
 1128 (2) In subsection (b), by inserting after paragraph (2)
 1129 the following:
 1130 "(3) ELECTRIC VEHICLE FLEET.—
 1131 "(A) IN GENERAL.—The plan required by each
 1132 Federal agency under subsection (b) to meet the
 1133 regulations under subsection (a) must also require a
 1134 minimum procurement of electric vehicles for the
 1135 vehicle fleet.

1188 (1) IN GENERAL.—Not later than 1 year after October
 1189 1, 2014, the Administrator, with the Secretary of
 1190 Transportation and Secretary of Energy, promulgate
 1191 standards under this section requiring that a certain
 1192 percentage of the passenger vehicle offerings for sale in the
 1193 United States by automobile manufactures have electric
 1194 drive options, and further that a certain percentage of all
 1195 light-duty and medium-duty passenger vehicles
 1196 manufactured and sold in the United States or imported and
 1197 sold in the United States be electric vehicles.
 1198 (2) ELECTRIC DRIVE VEHICLE OPTIONS.—For the
 1199 purpose of paragraph (1), the applicable percentages of
 1200 electric drive vehicle models of all the models of passenger
 1201 vehicles for sale in the United States by automobile
 1202 manufacturers shall be determined in accordance with the
 1203 following table:

Model year:	Percentage of models offered by a manufacturer that are electric drive vehicles
2016	15.0
2017	20.0
2018	25.0
2019	30.0
2020	40.0
2021	50.0
2022	55.0
2023	60.0
2024	65.0
2025	70.0

1204 (A) PLUG-IN HYBRID ELECTRIC VEHICLES.—For
 1205 the purpose of paragraph (2), of the electric drive
 1206 vehicle models offered, plug-in hybrid electric vehicle

1136 "(B) ELECTRIC VEHICLE FLEET
 1137 REQUIREMENTS.—
 1138 "(i) Not later than October 1, 2018, a
 1139 minimum of 15 percent of the light duty and
 1140 medium duty vehicle fleet of each Federal agency
 1141 must be electric drive vehicles.
 1142 "(ii) Not later than October 1, 2022, a
 1143 minimum of 35 percent of the light duty and
 1144 medium duty vehicle fleet of each Federal agency
 1145 must be electric drive vehicles.
 1146 "(iii) Not later than October 1, 2025, a
 1147 minimum of 50 percent of the light duty and
 1148 medium duty vehicle fleet of each Federal agency
 1149 must be electric drive vehicles.
 1150 "(iv) Not later than October 1, 2030, a
 1151 minimum of 75 percent of the light duty and
 1152 medium duty vehicle fleet of each Federal agency
 1153 must be electric drive vehicles."
 1154 **Subtitle C—Consumer Electric Vehicles**
 1155 **SEC. 221. DEFINITION.**
 1156 In this subtitle the term "electric drive vehicle" means
 1157 either—
 1158 (1) an "electric vehicle" as defined in section 201 of
 1159 this Title;
 1160 (2) a "fuel cell electric vehicle" as defined in section
 1161 201 of this Title; or

1207 models may fulfill a certain percentage of the
 1208 requirements set forth in paragraph (2). The
 1209 percentages shall be determined in accordance with
 1210 the following table:

Model year:	Percentage of electric drive vehicle models that may be plug-in hybrid electric vehicles
2016	100
2017	75.0
2018	66.0
2020	55.0
2021	50.0
2022	40.0
2023	30.0
2024	15.0
2025	0.0

1211 (3) ELECTRIC DRIVE VEHICLE SALES.—For the
 1212 purpose of paragraph (1), the percentages of light-duty and
 1213 medium-duty vehicles manufactured and sold in the United
 1214 States or imported and sold in the United States that must
 1215 be electric vehicles shall be determined in accordance with
 1216 the following table:

Model year:	Percentage of vehicle sales that are electric drive vehicles
2016	15.0
2017	20.0
2018	25.0
2020	32.0
2021	42.0
2022	55.0
2023	50.0
2024	65.0
2025	75.0

1217 (4) EXEMPTIONS.—
 1218 (A) LIMITED MODELS.—

1219 (i) Any motor vehicle manufacturer which
 1220 offers not more than 3 models is exempt from
 1221 the regulations of paragraphs (2) and (3).
 1222 (ii) Any motor vehicle manufacturer which
 1223 offers at least 3 but not more than 5 models is
 1224 exempt from the regulations of paragraph (2).
 1225 (i) The exempt manufacturer must
 1226 have one electric drive offering by model
 1227 year 2016, two electric drive offerings by
 1228 2018, and three electric drive offerings by
 1229 2023.
 1230 (II) Plug-in electric hybrid vehicles may
 1231 count toward the requirements of subclause
 1232 (1) according to the percentages in
 1233 paragraph (2), subparagraph (A).
 1234 (B) PETITION.—Any motor vehicle manufacturer
 1235 may petition the Secretary for an exemption from the
 1236 requirements of this section.
 1237 (i) CRITERIA.—The Administrator may
 1238 grant an exemption under subparagraph (A) only
 1239 to the extent that the Administrator finds, after a
 1240 hearing and opportunity for public comment, that
 1241 is not technically feasible to meet the electric
 1242 vehicle development and production
 1243 requirements of this section for a certain model
 1244 year.

1298 private locations, including street parking,
 1299 garages, parking lots, homes, gas stations, and
 1300 highway rest stops. Any such plan may also include—
 1301 "(i) battery exchange, fast charging
 1302 infrastructure and other services;
 1303 "(ii) triggers for infrastructure
 1304 deployment based upon market penetration of
 1305 plug-in electric drive vehicles; and
 1306 "(iii) such other elements as the State
 1307 determines necessary to support plug-in electric
 1308 drive vehicles.
 1309 "Each plan under this paragraph shall provide for the
 1310 deployment of the charging infrastructure or other
 1311 infrastructure necessary to adequately support the use of plug-
 1312 in electric drive vehicles.
 1313 "(B) SUPPORT REQUIREMENTS.—Each State
 1314 regulatory authority (in the case of each electric utility
 1315 for which it has ratemaking authority) and each utility
 1316 (in the case of a nonregulated utility) shall—
 1317 "(i) require that charging infrastructure
 1318 deployed is interoperable with products of all
 1319 auto manufacturers to the extent possible; and
 1320 "(ii) consider adopting minimum
 1321 requirements for deployment of electrical
 1322 charging infrastructure and other appropriate
 1323 requirements necessary to support the use of
 1324 plug-in electric drive vehicles.

1245 (ii) ADDITIONAL CRITERION.—To grant an
 1246 exemption for a product under this
 1247 subparagraph, the Administrator shall include, as
 1248 an additional criterion, that the exempted
 1249 manufacturer makes the necessary investments
 1250 to be able to meet the requirements for the
 1251 second model year after the exemption.
 1252 (iii) NO PRESUMPTION.—The grant of a
 1253 petition under this paragraph shall create no
 1254 presumption with respect to the determination of
 1255 the Administrator with respect to any criteria
 1256 under a rulemaking conducted under this section.
 1257 (C) ADMINISTRATOR DISCRETION.—The
 1258 Administrator may make additional exemptions from
 1259 the requirements of this section to manufacturers,
 1260 limited to one model year at a time, provided the case
 1261 for extreme extraneous circumstances that make it
 1262 not technically feasible to meet the electric vehicle
 1263 development and production requirements.
Subtitle D—Electric Charging
Infrastructure
SEC. 231. ELECTRIC CHARGING STATION
REQUIREMENTS.
 1267 (a) MARKET PENETRATION REPORTS.—The Secretary, in
 1268 consultation with the Secretary of Transportation, shall
 1269 determine and report to Congress annually on the market
 1270

1325 "(C) COST RECOVERY.—Each State regulatory
 1326 authority (in the case of each electric utility for which
 1327 it has ratemaking authority) and each utility (in the
 1328 case of a nonregulated utility) shall consider whether,
 1329 and to what extent, to allow cost recovery for plans
 1330 and implementation of plans.
 1331 "(D) SMART GRID INTEGRATION.— The State
 1332 regulatory authority (in the case of each electric utility
 1333 for which it has ratemaking authority) and each utility
 1334 (in the case of a nonregulated utility) shall, in
 1335 accordance with regulations issued by the Federal
 1336 Energy Regulatory Commission pursuant to section
 1337 1305(d) of the Energy Independence and Security Act
 1338 of 2007—
 1339 "(i) establish any appropriate protocols and
 1340 standards for integrating plug-in electric drive
 1341 vehicles into an electrical distribution system,
 1342 including Smart Grid systems and devices as
 1343 described in title XIII of the Energy
 1344 Independence and Security Act of 2007;
 1345 "(ii) include, to the extent feasible, the
 1346 ability for each plug-in electric drive vehicle to be
 1347 identified individually and to be associated with
 1348 its owner's electric utility account, regardless of
 1349 the location that the vehicle is plugged in, for
 1350 purposes of appropriate billing for any electricity
 1351 required to charge the vehicle's batteries as well

1271 penetration for electric drive vehicles in use within geographic
 1272 regions to be established by the Secretary.
 1273 (b) CHARGING STATION FEASIBILITY STUDY.—Not later
 1274 than 24 months after the date of enactment of this Act, the
 1275 Secretary, in consultation with the Department of
 1276 Transportation, shall report to the Congress on the feasibility of
 1277 requiring motor fuel retailers and owners of parking lots and
 1278 structures to install electric vehicle charging stations and
 1279 related systems in regions where electric vehicle market
 1280 penetration has reached 2 percent of motor vehicles:
 1281 (1) The commercial availability of electric vehicle
 1282 charging stations in a given region.
 1283 (2) The level of financial assistance provided on an
 1284 annual basis by the Federal Government, State
 1285 governments, and private or nonprofit entities for the
 1286 installation of electric vehicle charging infrastructure.
SEC. 232. ELECTRIC VEHICLE INFRASTRUCTURE.
 1287 (a) AMENDMENT OF PURPA.—Section 111(d) of the Public
 1288 Utility Regulatory Policies Act of 1978 (16 U.S.C. 2621(d)) is
 1289 amended by adding at the end the following:
 1290 "(20) PLUG-IN ELECTRIC DRIVE VEHICLE
 1291 INFRASTRUCTURE.—
 1292 "(A) UTILITY PLAN FOR INFRASTRUCTURE.—Each
 1293 electric utility shall develop a plan to support the use
 1294 of plug-in electric drive vehicles, including heavy-duty
 1295 hybrid electric vehicles. The plan may provide for
 1296 deployment of electrical charging stations in public or
 1297

1352 as any crediting for electricity provided to the
 1353 electric utility from the vehicle's batteries; and
 1354 "(iii) review the determination made in
 1355 response to section 1252 of the Energy Policy Act
 1356 of 2005 in light of this section, including whether
 1357 time-of-use pricing should be employed to enable
 1358 the use of plug-in electric drive vehicles to
 1359 contribute to meeting peak-load and ancillary
 1360 service power needs."
 1361 (b) COMPLIANCE.—
 1362 (1) TIME LIMITATIONS.—Section 112(b) of the Public
 1363 Utility Regulatory Policies Act of 1978 (16 U.S.C. 2622(b)) is
 1364 amended by adding the following at the end thereof:
 1365 "(7)(A) Not later than 3 years after the date of
 1366 enactment of this paragraph, each State regulatory
 1367 authority (with respect to each electric utility for which it
 1368 has ratemaking authority) and each nonregulated utility
 1369 shall commence the consideration referred to in section
 1370 111, or set a hearing date for consideration, with respect to
 1371 the standard established by paragraph (20) of section
 1372 111(d).
 1373 "(B) Not later than 4 years after the date of enactment
 1374 of the this paragraph, each State regulatory authority (with
 1375 respect to each electric utility for which it has ratemaking
 1376 authority), and each nonregulated electric utility, shall
 1377 complete the consideration, and shall make the

1378 determination, referred to in section 111 with respect to the
 1379 standard established by paragraph (20) of section 111(d).".
 1380 (2) FAILURE TO COMPLY.—Section 112(c) of the Public
 1381 Utility Regulatory Policies Act of 1978 (16 U.S.C. 2622(c)) is
 1382 amended by adding the following at the end: "In the case of
 1383 the standards established by paragraph (20) of section
 1384 111(d), the reference contained in this subsection to the
 1385 date of enactment of this Act shall be deemed to be a
 1386 reference to the date of enactment of such paragraph."
 1387 (3) PRIOR STATE ACTIONS.—Section 112(d) of the
 1388 Public Utility Regulatory Policies Act of 1978 (16 U.S.C.
 1389 2622(d)) is amended by striking "(19)" and inserting "(20)"
 1390 before "of section 111(d)".

1391 TITLE III—CARBON CAPTURE AND 1392 SEQUESTRATION

1393 SEC. 301. DEFINITION.

1394 In this title, the term "Administrator" means the
 1395 Administrator of the Environmental Protection Agency.

1396 SEC. 302. NATIONAL STRATEGY.

1397 (a) IN GENERAL.—Not later than 1 year after the date of
 1398 enactment of this Act, the Administrator, in consultation with
 1399 the Secretary of Energy, the Secretary of the Interior, and the
 1400 heads of such other relevant Federal agencies as the President
 1401 may designate, shall submit to Congress a report setting forth a
 1402 unified and comprehensive strategy to address the key legal,
 1403 regulatory and other barriers to the commercial-scale
 1404 deployment of carbon capture and sequestration.

1459 (1) data regarding injection, emissions to the
 1460 atmosphere, if any, and performance of active and closed
 1461 geologic sequestration sites, including those where
 1462 enhanced hydrocarbon recovery operations occur;
 1463 (2) an evaluation of the performance of relevant
 1464 Federal environmental regulations and programs in ensuring
 1465 environmentally protective geologic sequestration practices;
 1466 (3) recommendations on how such programs and
 1467 regulations should be improved or made more effective;
 1468 and
 1469 (4) other relevant information.
 1470 (e) SAFE DRINKING WATER ACT STANDARDS.— Section
 1471 1421 of the Safe Drinking Water Act (42 U.S.C. 300h) is
 1472 amended by inserting after subsection (d) the following:
 1473 "(e) CARBON DIOXIDE GEOLOGIC SEQUESTRATION
 1474 WELLS.—
 1475 "(1) IN GENERAL.—Not later than 1 year after the date
 1476 of enactment of this subsection, the Administrator shall
 1477 promulgate regulations under subsection (a) for carbon
 1478 dioxide geologic sequestration wells.
 1479 "(2) FINANCIAL RESPONSIBILITY.— The regulations
 1480 referred to in paragraph (1) shall include requirements for
 1481 maintaining evidence of financial responsibility, including
 1482 financial responsibility for emergency and remedial
 1483 response, well plugging, site closure, and post-injection site
 1484 care. Financial responsibility may be established for carbon
 1485 dioxide geologic sequestration wells in accordance with

1405 (b) BARRIERS.—The report under this section shall—
 1406 (1) identify those regulatory, legal, and other gaps and
 1407 barriers that could be addressed by a Federal agency using
 1408 existing statutory authority, those, if any, that require
 1409 Federal legislation, and those that would be best addressed
 1410 at the State, tribal, or regional level;
 1411 (2) identify regulatory implementation challenges,
 1412 including those related to approval of State and tribal
 1413 programs and delegation of authority for permitting; and
 1414 (3) recommend rulemakings, Federal legislation, or
 1415 other actions that should be taken to further evaluate and
 1416 address such barriers.
 1417 **SEC. 303. REGULATIONS FOR GEOLOGIC**
 1418 **SEQUESTRATION.**
 1419 (a) COORDINATED PROCESS.—The Administrator shall
 1420 establish a coordinated approach to certifying and permitting
 1421 geologic sequestration, taking into consideration all relevant
 1422 statutory authorities. In establishing such approach, the
 1423 Administrator shall—
 1424 (1) take into account, and reduce redundancy with, the
 1425 requirements of section 1421 of the Safe Drinking Water Act
 1426 (42 U.S.C. 300h), as amended by section 112(b) of the
 1427 American Clean Energy and Security Act of 2009, including
 1428 the rulemaking for geologic sequestration wells described at
 1429 73 Fed. Reg. 43491-541 (July 25, 2008); and
 1430 (2) to the extent practicable, reduce the burden on
 1431 certified entities and implementing authorities.

1486 regulations promulgated by the Administrator by any one,
 1487 or any combination, of the following: insurance, guarantee,
 1488 trust, standby trust, surety bond, letter of credit,
 1489 qualification as a self-insurer, or any other method
 1490 satisfactory to the Administrator."
 1491 **SEC. 304. STUDIES AND REPORTS.**
 1492 (a) STUDY OF LEGAL FRAMEWORK FOR GEOLOGIC
 1493 SEQUESTRATION SITES.—
 1494 (1) ESTABLISHMENT OF TASK FORCE.— As soon as
 1495 practicable, but not later than 6 months after the date of
 1496 enactment of this Act, the Administrator shall establish a
 1497 task force to be composed of an equal number of subject
 1498 matter experts, nongovernmental organizations with
 1499 expertise in environmental policy, academic experts with
 1500 expertise in environmental law, State and tribal officials
 1501 with environmental expertise, representatives of State and
 1502 tribal Attorneys General, representatives from the
 1503 Environmental Protection Agency, the Department of the
 1504 Interior, the Department of Energy, the Department of
 1505 Transportation, and other relevant Federal agencies, and
 1506 members of the private sector, to conduct a study of—
 1507 (A) existing Federal environmental statutes, State
 1508 environmental statutes, and State common law that
 1509 apply to geologic sequestration sites for carbon
 1510 dioxide, including the ability of such laws to serve as
 1511 risk management tools;

1432 (b) REGULATIONS.— Not later than 2 years after the date of
 1433 enactment of this title, the Administrator shall promulgate
 1434 regulations to protect human health and the environment by
 1435 minimizing the risk of escape to the atmosphere of carbon
 1436 dioxide injected for purposes of geologic sequestration.
 1437 (c) REQUIREMENTS.—The regulations under subsection (b)
 1438 shall include—
 1439 (1) a process to obtain certification for geologic
 1440 sequestration under this section; and
 1441 (2) requirements for—
 1442 (A) monitoring, record keeping, and reporting for
 1443 emissions associated with injection into, and escape
 1444 from, geologic sequestration sites;
 1445 (B) public participation in the certification process
 1446 that maximizes transparency;
 1447 (C) the sharing of data between States, Indian
 1448 tribes, and the Environmental Protection Agency; and
 1449 (D) other elements or safeguards necessary to
 1450 achieve the purpose set forth in subsection (b).
 1451 (d) REPORT.—Not later than 2 years after the promulgation
 1452 of the regulations under subsection (b), and at 3-year intervals
 1453 thereafter, the Administrator shall deliver to the Committee on
 1454 Energy and Commerce of the House of Representatives and the
 1455 Committee on Environment and Public Works of the Senate a
 1456 report on geologic sequestration in the United States, and, to
 1457 the extent relevant, other countries in North America. Such
 1458 report shall include—

1512 (B) the existing statutory framework, including
 1513 Federal and State laws, that apply to harm and
 1514 damage to the environment or public health at closed
 1515 sites where carbon dioxide injection has been used for
 1516 enhanced hydrocarbon recovery;
 1517 (C) the statutory framework, environmental
 1518 health and safety considerations, implementation
 1519 issues, and financial implications of potential models
 1520 for Federal, State, or private sector assumption of
 1521 liabilities and financial responsibilities with respect to
 1522 closed geologic sequestration sites;
 1523 (D) private sector mechanisms, including
 1524 insurance and bonding, that may be available to
 1525 manage environmental, health and safety risk from
 1526 closed geologic sequestration sites; and
 1527 (E) the subsurface mineral rights, water rights, or
 1528 property rights issues associated with geologic
 1529 sequestration of carbon dioxide, including issues
 1530 specific to Federal lands.
 1531 (2) REPORT.— Not later than 18 months after the date
 1532 of enactment of this Act, the task force established under
 1533 paragraph (1) shall submit to Congress a report describing
 1534 the results of the study conducted under that paragraph
 1535 including any consensus recommendations of the task force.
 1536 (b) ENVIRONMENTAL STATUTES.—
 1537 (1) STUDY.—The Administrator shall conduct a study
 1538 examining how, and under what circumstances, the

1539 environmental statutes for which the Environmental
 1540 Protection Agency has responsibility would apply to carbon
 1541 dioxide injection and geologic sequestration activities.
 1542 (2) REPORT.—Not later than 1 year after the date of
 1543 enactment of this Act, the Administrator shall submit to
 1544 Congress a report describing the results of the study
 1545 conducted under paragraph (1).
 1546 **SEC. 305. CARBON CAPTURE GRANT PROGRAM.**
 1547 (a) PROGRAM ESTABLISHMENT.—
 1548 (1) IN GENERAL.—The Secretary shall build upon the
 1549 technology developed and demonstrated in the Carbon
 1550 Capture and Sequestration Research, Development, and
 1551 Demonstration Program established by the Department of
 1552 Energy Carbon Capture and Sequestration Research,
 1553 Development and Demonstration Act of 2007, title VII of
 1554 the Energy Independence and Security Act of 2007 (42
 1555 U.S.C. 17251), and establish not later than January 1,
 1556 2015, a grant program to promote the implementation of
 1557 carbon capture and sequestration technologies for the
 1558 large-scale capture from carbon dioxide from industrial
 1559 sources. In making awards under this program, the
 1560 Secretary shall select, as appropriate, a diversity of capture
 1561 technologies to address the need to capture carbon dioxide
 1562 from a range of industrial sources.
 1563 (2) DEFINITION.—For the purposes of this section, the
 1564 term “large-scale” means the injection of more than
 1565 10,000,000 tons of carbon dioxide from industrial sources

1619 maximized. Not later than January 1, 2016, the Secretary shall
 1620 transmit to the Congress a report on the results of such review
 1621 and oversight.
 1622 **SEC. 307. GEOLOGIC SEQUESTRATION RESEARCH.**
 1623 (a) STUDY.—
 1624 (1) IN GENERAL.—The Secretary shall enter into an
 1625 arrangement with the National Academy of Sciences to
 1626 continue the study established by section 705 of the Energy
 1627 Independence and Security Act of 2007 (42 U.S.C. 17253)
 1628 to—
 1629 (A) define an interdisciplinary program in
 1630 geology, engineering, hydrology, environmental
 1631 science, and related disciplines that will support the
 1632 Nation’s capability to capture and sequester carbon
 1633 dioxide from anthropogenic sources;
 1634 (B) addresses undergraduate and graduate
 1635 education, especially to help develop graduate level
 1636 programs of research and instruction that lead to
 1637 advanced degrees with emphasis on geologic
 1638 sequestration science;
 1639 (C) develops guidelines for proposals from
 1640 colleges and universities with substantial capabilities
 1641 in the required disciplines that seek to implement
 1642 geologic sequestration science programs that advance
 1643 the Nation’s capacity to address carbon management
 1644 through geologic sequestration science; and

1566 annually or a scale that demonstrates the ability to inject
 1567 and sequester several tens of million metric tons of
 1568 industrial source carbon dioxide for a large number of years.
 1569 (3) SCOPE OF THE AWARD.—Awards under this section
 1570 shall be only for the portion of the project that—
 1571 (A) carries out the large-scale capture (including
 1572 purification and compression) of carbon dioxide from
 1573 industrial sources;
 1574 (B) provides for the transportation and injection
 1575 of carbon dioxide; and
 1576 (C) incorporates a comprehensive measurement,
 1577 monitoring, and validation program.
 1578 (4) PREFERENCES FOR AWARD.—The Secretary shall
 1579 give priority consideration to projects with the following
 1580 characteristics:
 1581 (A) CAPACITY.—Projects that will capture a high
 1582 percentage of the carbon dioxide in the treated stream
 1583 and large volumes of carbon dioxide as determined by
 1584 the Secretary.
 1585 (B) SEQUESTRATION.—Projects that capture
 1586 carbon dioxide from industrial sources that are new
 1587 suitable geological reservoirs and could continue
 1588 sequestration including—
 1589 (i) a field testing validation activity under
 1590 section 963 of the Energy Policy Act of 2005 (42
 1591 U.S.C. 16293); or

1645 (D) outlines a budget and recommendations for
 1646 how much funding will be necessary to establish and
 1647 carry out the grant program under subsection (b).
 1648 (2) REPORT.—Not later than 1 year after the date of
 1649 enactment of this Act, the Secretary shall transmit to the
 1650 Congress a copy of the results of the study provided by the
 1651 National Academy of Science under paragraph (1).
 1652 (3) AUTHORIZATION OF APPROPRIATIONS.—There are
 1653 authorized to be appropriated to the Secretary for carrying
 1654 out this subsection \$2,000,000 for fiscal year 2014.
 1655 (b) GRANT PROGRAM.—
 1656 (1) ESTABLISHMENT.—The Secretary shall establish a
 1657 competitive grant program through which colleges and
 1658 universities may apply for and receive 4-year grants for—
 1659 (A) salary and startup costs for newly designated
 1660 faculty positions in an integrated geologic carbon
 1661 sequestration science program; and
 1662 (B) internships for graduate students in geologic
 1663 sequestration science.
 1664 (2) RENEWAL.—Grants under this subsection shall be
 1665 renewable for up to 2 additional 3-year terms, based on
 1666 performance criteria, established by the National Academy
 1667 of Sciences study conducted under subsection (a), that
 1668 include the number of graduates of such programs.
 1669 (3) INTERFACE WITH REGIONAL GEOLOGIC CARBON
 1670 SEQUESTRATION PARTNERSHIPS.—To the greatest extent
 1671 possible, geologic carbon sequestration science programs

1592 (ii) other geologic sequestration projects
 1593 approved by the Secretary.
 1594 (5) REQUIREMENT.—For projects that generate carbon
 1595 dioxide that is to be sequestered, the carbon dioxide stream
 1596 shall be of a sufficient purity level to allow for safe transport
 1597 and sequestration.
 1598 (6) CARBON CAPTURE TARGETS.—The goal of the this
 1599 carbon capture grant program is to provide seed funding to
 1600 industrial entities to meet target levels of carbon dioxide
 1601 capture and sequestration on a large scale at industrial
 1602 sources throughout the United States. As a whole, the
 1603 Secretary shall ensure that grant funding results in
 1604 achieving a minimum target level of carbon capture.
 1605 (A) By the completion of the Carbon Capture
 1606 Grant Program, the total carbon capture capacity from
 1607 entities supported by the grant must reach a minimum
 1608 of 1,000,000,000 metric tons of carbon dioxide
 1609 annually.
 1610 (7) AUTHORIZATION OF APPROPRIATIONS.—There is
 1611 authorized to be appropriated to the Secretary to carry out
 1612 this section \$350,000,000 per year for fiscal years 2014
 1613 through 2019.
 1614 **SEC. 306. REVIEW OF LARGE-SCALE PROGRAMS.**
 1615 The Secretary shall enter into an arrangement with the
 1616 National Academy of Sciences for an independent review and
 1617 oversight, beginning in 2015 of the programs under section 305
 1618 of this title, to ensure that the benefits of such programs are

1672 supported under this subsection shall interface with the
 1673 research of the Regional Carbon Sequestration Partnerships
 1674 operated by the Department to provide internships and
 1675 practical training in carbon capture and geologic
 1676 sequestration.
 1677 (4) AUTHORIZATION OF APPROPRIATIONS.—There are
 1678 authorized to be appropriated to the Secretary for carrying
 1679 out this subsection such sums as may be necessary.
 1680 **SEC. 308. RELATION TO SAFE WATER DRINKING ACT.**
 1681 The injection and geologic sequestration of carbon dioxide
 1682 pursuant to this subtitle and the amendments made by this
 1683 subtitle shall be subject to the requirements of the Safe Water
 1684 Drinking Act (42 U.S.C. 300f et seq.), including the provisions
 1685 of part C of such Act (42 U.S.C. 300h et seq.; relating to
 1686 protection of underground sources of drinking water). Nothing
 1687 in this subtitle and the amendments made by this subtitle
 1688 imposes or authorizes the promulgation of any requirement
 1689 that is inconsistent or in conflict with the requirements of the
 1690 Safe Water Drinking Act (42 U.S.C. 300f et seq.) or regulations
 1691 thereunder.
 1692 **SEC. 309. SAFETY RESEARCH.**
 1693 (a) PROGRAM.—The Administrator of the Environmental
 1694 Protection Agency shall continue to conduct the research
 1695 program established by section 707 of the Energy
 1696 Independence and Security Act of 2007 (42 U.S.C. 17255) to
 1697 address public health, safety, and environmental impacts that

1698 may be associated with capture, injection, and sequestration of
 1699 greenhouse gases in geologic reservoirs.
 1700 (b) AUTHORIZATION OF APPROPRIATIONS.—There are
 1701 authorized to be appropriated for carrying out this section
 1702 \$3,000,000,000 for fiscal years 2014 through 2016.
 1703 **SEC. 310. UNIVERSITY BASED RESEARCH AND**
 1704 **DEVELOPMENT GRANT PROGRAM.**
 1705 (a) PROGRAM.—The Secretary, in consultation with other
 1706 appropriate agencies, shall continue the university based
 1707 research and development program established by section 708
 1708 of the Energy Independence and Security Act of 2007 (42
 1709 U.S.C. 17256) to study carbon capture and sequestration using
 1710 the various types of coal.
 1711 (b) RURAL AND AGRICULTURAL INSTITUTIONS.—The
 1712 Secretary shall give special consideration to rural and
 1713 agricultural institutions in areas that have regional sources of
 1714 coal and that offer interdisciplinary programs in the area of
 1715 environmental science to study carbon capture and
 1716 sequestration.
 1717 (c) AUTHORIZATION OF APPROPRIATIONS.—There are
 1718 authorized to be appropriated for carrying out this section
 1719 \$5,000,000,000 to carry out this section.
 1720 **TITLE IV—CLEAN, RENEWABLE ENERGY**
 1721 **RESOURCES**
 1722 **Subtitle A—Nuclear and Renewable**
 1723 **Energy Technology Deployment**
 1724 **SEC. 401. PURPOSE.**

1778 available at affordable rates to allow for widespread
 1779 deployment.
 1780 (5) COST.—The term "cost" has the meaning given the
 1781 term in section 502 of the Federal Credit Reform Act of
 1782 1990 (2 U.S.C. 661a).
 1783 (6) DIRECT LOAN.—The term "direct loan" has the
 1784 meaning given the term in section 502 of the Federal Credit
 1785 Reform Act of 1990 (2 U.S.C. 661a).
 1786 (7) FUND.—The term "Fund" means the Clean Energy
 1787 Investment Fund established by section 404(a).
 1788 (8) GREEN BONDS.—The term "Green Bonds" means
 1789 bonds issued pursuant to section 404.
 1790 (9) LOAN GUARANTEE.—The term "loan guarantee"
 1791 has the meaning given the term in section 502 of the
 1792 Federal Credit Reform Act of 1990 (2 U.S.C. 661a).
 1793 (10) NATIONAL LABORATORY.—The term "National
 1794 Laboratory" has the meaning given the term in section 2 of
 1795 the Energy Policy Act of 2005 (42 U.S.C. 15801).
 1796 (11) STATE.—The term "state" means—
 1797 (A) a State;
 1798 (B) the District of Columbia;
 1799 (C) the Commonwealth of Puerto Rico; and
 1800 (D) any other territory or possession of the United
 1801 States.
 1802 (12) TECHNOLOGY RISK.—The term "technology risk"
 1803 means the risks during construction or operation associated
 1804 with the design, development, and deployment of clean

1725 The purpose of this subtitle is to promote the domestic
 1726 development and deployment of clean energy technologies
 1727 required for the 21st century through the establishment of a
 1728 self-sustaining Clean Energy Deployment Administration that
 1729 will provide for an attractive investment environment through
 1730 partnership with and support of the private capital market in
 1731 order to promote access to affordable financing for accelerated
 1732 and widespread deployment of—
 1733 (1) nuclear energy technologies;
 1734 (2) other clean energy technologies;
 1735 (3) advanced or enabling energy infrastructure
 1736 technologies;
 1737 (4) manufacturing technologies for any of the
 1738 technologies or applications described in this section.
 1739 **SEC. 402. DEFINITIONS.**
 1740 In this subtitle:
 1741 (1) ADMINISTRATION.—The term "Administration
 1742 means the Clean Energy Deployment Administration
 1743 established by section 405.
 1744 (2) ADVISORY COUNCIL.—The term "Advisory Council"
 1745 means the Energy Technology Advisory Council of the
 1746 Administration.
 1747 (3) BREAKTHROUGH TECHNOLOGY.—The term
 1748 "breakthrough technology" means a clean energy
 1749 technology that—
 1750 (A) presents a significant opportunity to advance
 1751 the goals developed under section 403, as assessed

1805 energy technologies (including the cost, schedule,
 1806 performance, reliability and maintenance, and accounting
 1807 for the perceived risk), from the perspective of commercial
 1808 lenders, that may be increased as a result of the absence of
 1809 adequate historical construction, operating, or performance
 1810 data from commercial applications of the technology.
 1811 **SEC. 403. ENERGY TECHNOLOGY DEPLOYMENT GOALS.**
 1812 (a) GOALS.—Not later than 1 year after the date of
 1813 enactment of this Act, the Secretary, after consultation with the
 1814 Advisory Council, shall develop and publish for review and
 1815 comment in the Federal Register recommended near-, medium-,
 1816 and long-term goals (including numerical performance targets
 1817 at appropriate intervals to measure progress toward those
 1818 goals) for the deployment of clean energy technologies through
 1819 the credit support programs established by section 406 to
 1820 promote—
 1821 (1) sufficient electric generation capacity using clean
 1822 energy technologies to meet the energy needs of the United
 1823 States;
 1824 (2) development and deployment of advanced nuclear
 1825 energy generation capabilities;
 1826 (3) development and deployment of secure nuclear
 1827 fuel reprocessing technologies;
 1828 (4) a domestic commercialization and manufacturing
 1829 capacity that will establish the United States as a world
 1830 leader in clean energy technologies across multiple sectors;

1752 under the methodology established by the Advisory
 1753 Council; but
 1754 (B) has generally not been considered a
 1755 commercially ready technology as a result of high
 1756 perceived technology risk or other similar factors.
 1757 (4) CLEAN ENERGY TECHNOLOGY.—The term "clean
 1758 energy technology" means a technology related to the
 1759 production, use, transmission, storage, control, or
 1760 conservation of energy—
 1761 (A) that will contribute to a stabilization of
 1762 atmospheric greenhouse gas concentrations through
 1763 reduction, or avoidance of energy-related emissions
 1764 and—
 1765 (i) reduce the need for additional energy
 1766 supplies by using existing energy supplies with
 1767 greater efficiency or by transmitting, distributing,
 1768 or transporting energy with greater effectiveness
 1769 through the infrastructure of the United States;
 1770 or
 1771 (ii) diversify the sources of energy supply of
 1772 the United States to strengthen energy security
 1773 and to increase supplies with a favorable balance
 1774 of environmental effects if the entire technology
 1775 system is considered; and
 1776 (B) for which, as determined by the
 1777 Administrator, insufficient commercial lending is

1831 (5) installation of sufficient infrastructure to allow for
 1832 the cost-effective deployment of clean energy technologies
 1833 appropriate to each region of the United States;
 1834 (6) the recovery, use, and prevention of waste energy;
 1835 (7) domestic manufacturing of clean energy
 1836 technologies on a scale that is sufficient to achieve price
 1837 parity with conventional energy sources;
 1838 (8) a robust, efficient, and interactive electricity
 1839 transmission grid that will allow for the incorporation of
 1840 clean energy technologies, distributed generation, and
 1841 demand-response in each regional electric grid.
 1842 (9) such other goals as the Secretary, in consultation
 1843 with the Advisory Council determines to be consistent with
 1844 the purpose stated in section 401.
 1845 **SEC. 404. CLEAN ENERGY INVESTMENT FUND.**
 1846 (a) ESTABLISHMENT.—There is established in the Treasury
 1847 of the United States a revolving fund, to be known as the
 1848 "Clean Energy Investment Fund", consisting of—
 1849 (1) such amounts as are deposited in the Fund under
 1850 this subtitle;
 1851 (2) such sums as may be appropriated to supplement
 1852 the Fund.
 1853 (b) AUTHORIZATION OF APPROPRIATIONS.—There are
 1854 authorized to be appropriated to the Fund such sums as are
 1855 necessary to carry out this subtitle.
 1856 (c) EXPENDITURES FROM THE FUND.—

1857 (1) IN GENERAL.—Amounts in the Fund shall be
 1858 available to the Administrator of the Administration for
 1859 obligation without fiscal year limitation, to remain available
 1860 until expended.

1861 (2) ADMINISTRATIVE EXPENSES.—
 1862 (A) FEES.—Fees collected for administrative
 1863 expenses shall be available without limitation to cover
 1864 applicable expenses.

1865 (B) FUND.—To the extent that administrative
 1866 expenses are not reimbursed through fees, an amount
 1867 not to exceed 1.5 percent of the amounts in the Fund
 1868 as of the beginning of each fiscal year shall be
 1869 available to pay the administrative expenses for the
 1870 fiscal year necessary to carry out this subtitle.

1871 (d) TRANSFERS OF AMOUNTS.—
 1872 (1) IN GENERAL.—The amounts required to be
 1873 transferred to the Fund under this section shall be
 1874 transferred at least monthly from the general fund of the
 1875 Treasury to the Fund on the basis of estimates made by the
 1876 Secretary of the Treasury.

1877 (2) ADJUSTMENTS.—Proper adjustment shall be made
 1878 in amounts subsequently transferred to the extent prior
 1879 estimates were in excess of or less than the amounts
 1880 required to be transferred.

1881 (3) CASH FLOWS.—Cash flows associated with costs of
 1882 the Fund described in section 502(5)(B) of the Federal

1937 (i) maintain the principal office of the
 1938 Administration in the national capital region; and
 1939 (ii) for purposes of venue in civil actions, be
 1940 considered a resident of the District of Columbia.

1941 (B) OTHER OFFICES.—The Administration may
 1942 establish other offices in such other places as the
 1943 Administration considers necessary or appropriate for
 1944 the conduct of the business of the Administration.

1945 (b) ADMINISTRATOR.—
 1946 (1) IN GENERAL.—The Administrator of the
 1947 Administration shall be—
 1948 (A) appointed by the President, with the advice
 1949 and consent of the Senate, for a 5-year term; and
 1950 (B) compensated at the prevailing rate for
 1951 compensation for similar positions in the industry.

1952 (2) DUTIES.—The Administrator of the Administration
 1953 shall—
 1954 (A) serve as the Chief Executive Officer of the
 1955 Administration and Chairman of the Board;
 1956 (B) ensure that—
 1957 (i) the Administration operates in a safe
 1958 and sound manner, including maintenance of
 1959 adequate capital and internal controls (consistent
 1960 with section 404 of the Sarbanes-Oxley Act of
 1961 2002 (15 U.S.C. 7262));
 1962 (ii) the operations and activities of the
 1963 Administration foster liquid, efficient,

1883 Credit Reform Act of 1990 (2 U.S.C. 661a(5)(B)) shall be
 1884 transferred to appropriate credit accounts.

1885 (e) GREEN BONDS.—
 1886 (1) INITIAL CAPITALIZATION.—The Secretary of the
 1887 Treasury shall issue Green Bonds in the amount of
 1888 \$7,500,000,000 on the credit of the United States to
 1889 acquire capital stock of the Administration. Stock certificates
 1890 evidencing ownership in the Administration shall be issued
 1891 by the Administration to the Secretary of the Treasury, to
 1892 the extent of payments made for the capital stock of the
 1893 Administration.

1894 (2) DENOMINATIONS AND MATURITY.—Green Bonds
 1895 shall be in such forms and denominations, and shall mature
 1896 within such periods, as determined by the Secretary of the
 1897 Treasury.

1898 (3) INTEREST.—Green Bonds shall bear interest at a
 1899 rate not less than the current average yield on outstanding
 1900 market obligations of the United States of comparable
 1901 maturity during the month preceding the issuance of the
 1902 obligation as determined by the Secretary of the Treasury.

1903 (4) LAWFUL INVESTMENTS.—Green Bonds shall be
 1904 lawful investments, and may be accepted as security for all
 1905 fiduciary, trust, and public funds, the investment or deposit
 1906 of which shall be under the authority or control of the
 1907 United States or any officer or officers thereof.

1908 **SEC. 405. CLEAN ENERGY DEPLOYMENT**
 1909 **ADMINISTRATION.**

1964 competitive, and resilient energy and energy
 1965 efficiency finance markets;
 1966 (iii) the Administration carries out the
 1967 purpose stated in section 401 only through
 1968 activities that are authorized under and
 1969 consistent with sections 401 through 407; and
 1970 (iv) the activities of the Administration and
 1971 the manner in which the Administration is
 1972 operated are consistent with the public interest;

1973 (C) develop policies and procedures for the
 1974 Administration that will—
 1975 (i) promote a self-sustaining portfolio of
 1976 investments that will maximize the value of
 1977 investments to effectively promote clean energy
 1978 technologies;
 1979 (ii) promote transparency and openness in
 1980 Administration operations;
 1981 (iii) afford the Administration with sufficient
 1982 flexibility to meet the purpose stated in section
 1983 401; and
 1984 (iv) provide for the efficient processing of
 1985 applications; and
 1986 (D) with the concurrence of the Board, set
 1987 expected loss reserves for the support provided by the
 1988 Administration consistent with section 406(c).

1989 (c) BOARD OF DIRECTORS.—

1910 (a) ESTABLISHMENT.—
 1911 (1) ESTABLISHMENT OF CORPORATION.—There is
 1912 established a corporation to be known as the Clean Energy
 1913 Deployment Administration that shall be wholly owned by
 1914 the United States.

1915 (2) INDEPENDENT CORPORATION.—The Administration
 1916 shall be an independent corporation. Neither the
 1917 Administration nor any of its functions, powers, or duties
 1918 shall be transferred to or consolidated with any other
 1919 department, agency, or corporation of the Government
 1920 unless the Congress provides otherwise.

1921 (3) CHARTER.—The Administration shall be chartered
 1922 for 20 years from the date of enactment of this section.

1923 (4) STATUS.—
 1924 (A) INSPECTOR GENERAL.—Section 12 of the
 1925 Inspector General Act of 1978 (5 U.S.C. App.) is
 1926 amended—
 1927 (i) in paragraph (1), by inserting “the
 1928 Administrator of the Clean Energy Deployment
 1929 Administration:” after “Export-Import Bank;”;
 1930 and
 1931 (ii) in paragraph (2), by inserting “the Clean
 1932 Energy Deployment Administration,” after
 1933 “Export-Import Bank.”

1934 (5) OFFICES.—
 1935 (A) PRINCIPAL OFFICE.—The Administration
 1936 shall—

1990 (1) IN GENERAL.—The Board of Directors of the
 1991 Administration shall consist of—
 1992 (A) the Secretary or the designee of the
 1993 Secretary, who shall serve as an ex-officio member of
 1994 the Board of Directors;
 1995 (B) the Secretary of the Treasury or the designee
 1996 of the Secretary, who shall serve as an ex-officio
 1997 member of the Board of Directors;
 1998 (C) the Secretary of the Interior or the designee
 1999 of the Secretary, who shall serve as an ex-officio
 2000 member of the Board of Directors;
 2001 (D) the Secretary of Agriculture or the designee
 2002 of the Secretary, who shall serve as an ex-officio
 2003 member of the Board of Directors;
 2004 (E) the Administrator of the Administration, who
 2005 shall serve as the Chairman of the Board of Directors;
 2006 and
 2007 (F) 4 additional members who shall—
 2008 (i) be appointed by the President, with the
 2009 advice and consent of the Senate, for staggered
 2010 5-year terms; and
 2011 (ii) have experience in banking, financial
 2012 services, technology assessment, energy
 2013 regulation, or risk management, including
 2014 individuals with substantial experience in the
 2015 development of energy projects, the electricity
 2016 generation sector, the transportation sector, the

2017 manufacturing sector, and the energy efficiency
2018 sector.
2019 (2) DUTIES.—The Board of Directors shall—
2020 (A) oversee the operations of the Administration
2021 and ensure industry best practices are followed in all
2022 financial transactions involving the Administration;
2023 (B) consult with the Administrator of the
2024 Administration on the general policies and procedures
2025 of the Administration to ensure the interests of the
2026 taxpayers are protected;
2027 (C) ensure the portfolio of investments are
2028 consistent with purpose stated in section 401 and with
2029 the long-term financial stability of the Administration;
2030 (D) ensure that the operations and activities of
2031 the Administration are consistent with the
2032 development of a robust private sector that can
2033 provide commercial loans or financing products; and
2034 (E) not serve on a full-time basis, except that the
2035 Board of Directors shall meet at least quarterly for
2036 review, as appropriate, applications for credit support
2037 and set policies and procedures as necessary.
2038 (3) REMOVAL.—An appointed member of the Board of
2039 Directors may be removed from office by the President for
2040 good cause.
2041 (4) VACANCIES.—An appointed seat on the Board of
2042 Directors that becomes vacant shall be filled by

2097 time) during which the member is engaged in the
2098 performance of the duties of the Advisory Council.
2099 (e) STAFF.—
2100 (1) IN GENERAL.—The Administrator of the
2101 Administration, in consultation with the Board of Directors,
2102 may—
2103 (A) appoint and terminate such officers,
2104 attorneys, employees, and agents as are necessary to
2105 carry out this subtitle; and
2106 (B) vest those personnel with such powers and
2107 duties as the Administrator of the Administration may
2108 determine.
2109 (f) CONFLICTS OF INTEREST.—No director, officer, attorney,
2110 agent, or employee of the Administration shall in any manner,
2111 directly or indirectly, participate in the deliberation upon, or the
2112 determination of, any question affecting such individual's
2113 personal interests, or the interests of any corporation,
2114 partnership, or association in which such individual is directly or
2115 indirectly personally interested.
2116 (g) SUNSET.—
2117 (1) EXPIRATION OF CHARTER.—The Administration
2118 shall continue to exercise its functions until all obligations
2119 and commitments of the Administration are discharged,
2120 even after its charter has expired.
2121 (2) PRIOR OBLIGATIONS.—No provisions of this
2122 subsection shall be construed as preventing the
2123 Administration from—

2043 appointment by the President, but only for the unexpired
2044 portion of the term of the vacating member..
2045 (5) COMPENSATION OF MEMBERS.—An appointed
2046 member of the Board of Directors shall be compensated at
2047 the prevailing rate for compensation for similar positions in
2048 industry.
2049 (d) ENERGY TECHNOLOGY ADVISORY COUNCIL.—
2050 (1) IN GENERAL.—The Administration shall have an
2051 Energy Technology Advisory Council consisting of 8
2052 members selected by the Board of Directors of the
2053 Administration.
2054 (2) QUALIFICATIONS.—The members of the Advisory
2055 council shall—
2056 (A) have nuclear or clean energy project
2057 development, nuclear or clean energy finance,
2058 commercial, and/or relevant scientific expertise; and
2059 (B) include representatives of—
2060 (i) the academic community;
2061 (ii) the private research community;
2062 (iii) National Laboratories;
2063 (iv) the technology or project development
2064 community; and
2065 (v) the commercial energy financing and
2066 operations sector.
2067 (3) DUTIES.—The Advisory Council shall—
2068 (A) develop and publish for comment in the
2069 Federal Register a methodology for assessment of

2124 (A) undertaking obligations prior to the date of
2125 the expiration of its charter which mature subsequent
2126 to such date;
2127 (B) assuming, prior to the date of the expiration
2128 of its charter, liability as guarantor, endorser, or
2129 acceptor of obligations which mature subsequent to
2130 such date; or
2131 (C) continuing as a corporation and exercising
2132 any of its functions subsequent to the date of the
2133 expiration of its charter for purposes of orderly
2134 liquidation, including the administration of its assets
2135 and the collection of any obligations held by the
2136 Administration.
2137 **SEC. 406. DIRECT SUPPORT.**
2138 (a) IN GENERAL.—The Administration may issue direct
2139 loans, letters of credit, and loan guarantees to deploy clean
2140 energy technologies if the Administrator of the Administration
2141 has determined that deployment of the technologies would
2142 benefit or be accelerated by the support.
2143 (b) ELIGIBILITY CRITERIA.—In carrying out this section and
2144 awarding credit support to projects, the Administrator of the
2145 Administration shall account for—
2146 (1) how the technology rates based on an evaluation
2147 methodology established by the Advisory Council;
2148 (2) how the project fits with the goals established
2149 under section 403; and

2070 nuclear and other clean energy technologies that will
2071 allow the Administration to evaluate projects based on
2072 the progress likely to be achieved per-dollar invested
2073 in maximizing the attributes of the definition of clean
2074 energy technology, taking into account the extent to
2075 which support for a clean energy technology is likely
2076 to accrue subsequent benefits that are attributable to
2077 a commercial scale deployment taking place earlier
2078 than that which otherwise would have occurred
2079 without the support; and
2080 (B) advise on the technological approaches that
2081 should be supported by the Administration to meet the
2082 technology deployment goals established by the
2083 Secretary pursuant to section 403.
2084 (4) TERM.—
2085 (A) IN GENERAL.—Members of the Advisory
2086 Council shall have 5-year staggered terms, as
2087 determined by the Administrator of the
2088 Administration.
2089 (B) REAPPOINTMENT.—A member of the Advisory
2090 Council may be reappointed.
2091 (5) COMPENSATION.—A member of the Advisory
2092 Council, who is not otherwise compensated as a Federal
2093 employee, shall be compensated at a rate equal to the daily
2094 equivalent of the annual rate of basic pay prescribed for
2095 level IV of the Executive Schedule under section 5315 of
2096 title 5, United States Code, for each day (including travel

2150 (3) the potential for the applicant to successfully
2151 complete the project.
2152 (c) RISK.—
2153 (1) PORTFOLIO INVESTMENT APPROACH.—The
2154 Administration shall—
2155 (A) use a portfolio investment approach to
2156 mitigate risk and diversify investments across
2157 technologies and ensure that no particular technology
2158 is provided more than 30 percent of the financial
2159 support available;
2160 (B) to the maximum extent practicable and
2161 consistent with long-term self-sufficiency, weigh the
2162 portfolio of investments in projects to advance the
2163 goals established under section 403;
2164 (C) consistent with the expected loan loss reserve
2165 established under this subsection, the purpose stated
2166 in section 401, and section 405(b)(2)(B), provide the
2167 maximum practicable percentage of support to
2168 promote breakthrough technologies;
2169 (D) invest at a minimum 50 percent of funds
2170 toward nuclear clean energy technologies; and
2171 (E) give the highest priority to investments that
2172 promote technologies that will achieve the maximum
2173 greenhouse gas emission reductions within a
2174 reasonable period of time per dollar invested and the
2175 earliest reductions in greenhouse gas emissions.

2176 (d) FEDERAL COST SHARE.—Direct loans, letters of credit
2177 and loan guarantees by the Administration shall not exceed an
2178 amount equal to 80 percent of the project cost of the facility
2179 that is the subject of the loan, letter of credit or loan
2180 guarantee, as estimated at the time at which the loan, letter of
2181 credit or loan guarantee is issued.

2182 (e) APPLICATION REVIEW.—

2183 (1) IN GENERAL.—To the maximum extent practicable
2184 and consistent with sound business practices, the
2185 Administration shall seek to consolidate reviews of
2186 applications for credit support under this subtitle such that
2187 final decisions on applications can generally be issued not
2188 later than 180 days after the date of submission of a
2189 completed application.

2190 (2) ENVIRONMENTAL REVIEW.—In carrying out this
2191 subtitle, the Administration shall, to the maximum extent
2192 practicable—

2193 (A) avoid duplicating efforts that have already
2194 been undertaken by other agencies (including State
2195 agencies acting under Federal programs); and

2196 (B) with the advice of the Council on
2197 Environmental Quality and any other applicable
2198 agencies, use the administrative records of similar
2199 reviews conducted throughout the executive branch to
2200 develop the most expeditious review process
2201 practicable.

2202 (f) LIMITATIONS.—

2257 (G) Qualified hydropower.

2258 (H) Marine and hydrokinetic renewable
2259 energy, as that term is defined in section 632 of
2260 the Energy Independence and Security Act of 2007
2261 (42 U.S.C. 17211).

2262 (c) TRANSPARENCY.—The Administration shall seek to
2263 foster through its credit support activities—

2264 (1) the development and consistent application of
2265 standard contractual terms, transparent underwriting
2266 standards and consistent measurement and verification
2267 protocols, as applicable; and

2268 (2) the creation of performance data that promotes
2269 effective underwriting and risk management to support
2270 lending markets and stimulate the development of
2271 private investment markets.

2272 (d) EXEMPT SECURITIES.—All securities insured or
2273 guaranteed by the Administration shall, to the same extent
2274 as securities that are direct obligations of or obligations
2275 guaranteed as to the principal or interest by the United
2276 States, be considered to be exempt securities within the
2277 meaning of the laws administered by the Securities and
2278 Exchange Commission.

2279 **SEC. 408. FEDERAL CREDIT AUTHORITY.**

2280 (a) PAYMENTS OF LIABILITIES.—

2281 (1) IN GENERAL.—Any payment made to discharge
2282 liabilities arising from agreements under this subtitle

2203 (1) The Administration shall not provide direct support
2204 as defined under this section or indirect support as defined
2205 under section 188 to an individual clean energy technology
2206 project that obtained a loan guarantee under title XVII of
2207 the Energy Policy Act of 2005.

2208 (2) No direct or indirect support provided by the
2209 Administration may be used to pay any part of the cost of
2210 an obligation or a loan guarantee under title XVII of the
2211 Energy Policy Act of 2005.

2212 **SEC. 407. INDIRECT SUPPORT.**

2213 (a) IN GENERAL.—For the purpose of enhancing the
2214 availability of private financing for clean energy technology
2215 deployment, the Administration may—

2216 (1) provide credit support to portfolios of taxable
2217 debt obligations originated by state, local, and private
2218 sector entities that enable owners and users of buildings
2219 and industrial facilities to—

2220 (A) significantly increase the energy efficiency
2221 of such buildings or facilities; or

2222 (B) install systems that individually generate
2223 electricity from renewable energy resources and
2224 have a capacity of no more than 2 megawatts;

2225 (2) facilitate financing transactions in tax equity
2226 markets and long-term purchasing of clean energy by
2227 state, local, and non-governmental not-for-profit
2228 entities, to the degree and extent that the
2229 Administration determines such financing activity is

2283 shall be paid exclusively out of the Fund or the
2284 associated credit account, as appropriate.

2285 (2) SECURITY.—Subject to paragraph (1), the full
2286 faith and credit of the United States is pledged to the
2287 payment of all obligations entered into by the
2288 Administration pursuant to this subtitle.

2289 (b) FEES.—

2290 (1) IN GENERAL.—Consistent with achieving the
2291 purpose stated in section 401, the Administrator of the
2292 Administration shall charge fees or collect compensation
2293 generally in accordance with commercial rates.

2294 (2) AVAILABILITY OF FEES.—All fees collected by
2295 the Administration may be retained by the
2296 Administration and placed in the Fund and may remain
2297 available to the Administration, without further
2298 appropriation or fiscal year limitation, for use in carrying
2299 out the purpose stated in section 401.

2300 (3) BREAKTHROUGH FEES.—The Administration
2301 shall charge the minimum amount in fees or
2302 compensation practicable for breakthrough technologies,
2303 consistent with the long-term viability of the
2304 Administration, unless the Administration first
2305 determines that a higher charge will not impede the
2306 development of the technology.

2307 (4) ALTERNATIVE FEE ARRANGEMENTS.—The
2308 Administration may use such alternative arrangements
2309 (such as profit participation, contingent fees, and other

2230 appropriate and consistent with carrying out the
2231 purposes described in section 401 of this Act; and

2232 (3) provide credit support to portfolios of taxable
2233 debt obligations originated by state, local, and private
2234 sector entities that enable the deployment of energy
2235 storage applications for electric drive vehicles, stationary
2236 applications, and electricity transmission and
2237 distribution.

2238 (b) DEFINITIONS.—For the purposes of this section:

2239 (1) CREDIT SUPPORT.—The term “credit support
2240 means—

2241 (A) direct loans, letters of credit, loan
2242 guarantees, and insurance products; and

2243 (B) the purchase or commitment to purchase,
2244 or the sale or commitment to sell, debt
2245 instruments (including subordinated securities).

2246 (2) RENEWABLE ENERGY RESOURCE.—The term
2247 “renewable energy resource” means each of the
2248 following:

2249 (A) Wind energy.

2250 (B) Solar energy.

2251 (C) Geothermal energy.

2252 (D) Renewable biomass.

2253 (E) Biogas derived exclusively from renewable
2254 biomass.

2255 (F) Biofuels derived exclusively from
2256 renewable biomass.

2310 valuable contingent interests) as the Administration
2311 considers appropriate to compensate the Administration
2312 for the expenses of the Administration and the risk
2313 inherent in the support of the Administration.

2314 (c) COST TRANSFER AUTHORITY.—Amounts collected by
2315 the Administration for the cost of a loan or loan guarantee
2316 shall be transferred by the Administration to the respective
2317 credit accounts.

2318 **SEC. 409. GENERAL PROVISIONS AND CONFORMING**
2319 **AMENDMENTS.**

2320 (a) IMMUNITY FROM IMPAIRMENT, LIMITATION, OR
2321 RESTRICTION.—

2322 (1) IN GENERAL.—All rights and remedies of the
2323 Administration (including any rights and remedies of the
2324 Administration on, under, or with respect to any mortgage
2325 or any obligation secured by a mortgage) shall be immune
2326 from impairment, limitation, or restriction by or under—

2327 (A) any law (other than a law enacted by
2328 Congress expressly in limitation of this paragraph)
2329 that becomes effective after the acquisition by the
2330 Administration of the subject or property on, under, or
2331 with respect to which the right or remedy arises or
2332 exists or would so arise or exist in the absence of the
2333 law; or

2334 (B) any administrative or other action that
2335 becomes effective after the acquisition.

2336 (2) STATE LAW.—The Administrator of the
 2337 Administration may conduct the business of the
 2338 Administration without regard to any qualification or law of
 2339 any State relating to incorporation.

2340 (b) USE OF OTHER AGENCIES.—With the consent of a
 2341 department, establishment, or instrumentality (including any
 2342 field office), the Administration may—

2343 (1) use and act through any department,
 2344 establishment, or instrumentality; and

2345 (2) use, and pay compensation for, information,
 2346 services, facilities, and personnel of the department,
 2347 establishment, or instrumentality.

2348 (c) FINANCIAL MATTERS.—

2349 (1) INVESTMENTS.—Funds of the Administration may
 2350 be invested in such investments as the Board of Directors
 2351 may prescribe. Earnings from such funds, other than fees
 2352 collected under section 408, may be spent by the
 2353 Administration only to such extent or in such amounts as
 2354 are provided in advance by appropriation Acts.

2355 (2) FISCAL AGENTS.—Any Federal Reserve bank or
 2356 any bank as to which at the time of the designation of the
 2357 bank by the Administrator of the Administration there is
 2358 outstanding a designation by the Secretary of the Treasury
 2359 as a general or other depository of public money, may be
 2360 designated by the Administrator of the Administration as a
 2361 depository or custodian or as a fiscal or other agent of the
 2362 Administration.

2417 (1) IN GENERAL.—The Administrator—

2418 (A) shall require any entity receiving financing
 2419 support from the Administration to report quarterly, in
 2420 a format specified by the Administrator, on such
 2421 entity's use of such support and its progress fulfilling
 2422 the objectives for which such support was granted,
 2423 and the Administrator shall make these reports
 2424 available to the public;

2425 (B) may establish additional reporting and
 2426 information requirements for any recipient of financing
 2427 support from the Administration;

2428 (C) shall establish appropriate mechanisms to
 2429 ensure appropriate use and compliance with all terms
 2430 of any financing support from the Administration;

2431 (D) shall create and maintain a fully searchable
 2432 database, accessible on the Internet (or successor
 2433 protocol) at no cost to the public, that contains at
 2434 least—

2435 (i) a list of each entity that has applied for
 2436 financing support;

2437 (ii) a description of each application;

2438 (iii) the status of each such application;

2439 (iv) the name of each entity receiving
 2440 financing support;

2441 (v) the purpose for which such entity is
 2442 receiving such financing support;

2363 (d) PERIODIC REPORTS.—Not later than 1 year after
 2364 commencement of operation of the Administration and at least
 2365 biannually thereafter, the Administrator of the Administration
 2366 shall submit to the Committee on Energy and Natural
 2367 Resources and the Committee on Finance of the Senate and the
 2368 Committee on Energy and Commerce and the Committee on
 2369 Ways and Means of the House of Representatives a report that
 2370 includes a description of—

2371 (1) the technologies supported by activities of the
 2372 Administration and how the activities advance the purpose
 2373 stated in section 401; and

2374 (2) the performance of the Administration on meeting
 2375 the goals established under section 403.

2376 (e) FINANCIAL REPORTS.—

2377 (1) IN GENERAL.—The Administrator of the
 2378 Administration shall submit to the Secretary and to the
 2379 Committee on Energy and Natural Resources and the
 2380 Committee on Finance of the Senate and the Committee on
 2381 Energy and Commerce and the Committee on Ways and
 2382 Means of the House annual and quarterly reports of the
 2383 financial condition and operations of the Administration,
 2384 which shall be in such form, contain such information, and
 2385 be submitted on such dates as the Secretary shall require.

2386 (2) CONTENTS OF ANNUAL REPORTS.—Each annual
 2387 report shall include—

2388 (A) financial statements prepared in accordance
 2389 with generally accepted accounting principles;

2443 (vi) each quarterly report submitted by the
 2444 entity pursuant to this section; and

2445 (vii) such other information sufficient
 2446 to allow the public to understand and monitor the
 2447 financial support provided by the Administration;

2448 (E) shall make all financing transactions available
 2449 for public inspection, including formal annual reviews
 2450 by both a private auditor and the Comptroller General;
 2451 and

2452 (F) shall at all times be available to receive public
 2453 comment in writing on the activities of the
 2454 Administration.

2455 (2) PROTECTION OF CONFIDENTIAL BUSINESS
 2456 INFORMATION.—To the extent necessary and appropriate,
 2457 the Administrator may redact any information regarding
 2458 applicants and borrowers to protect confidential business
 2459 information.

2460 (g) TAX EXEMPT STATUS.—Section 501(i) of the Internal
 2461 Revenue Code of 1986 is amended by adding at the end of the
 2462 following:

2463 “(4) The Clean Energy Deployment Administration
 2464 established under section 406 of the Energizing the
 2465 Future of America Act of 2014.”.

2466 (h) WHOLLY OWNED GOVERNMENT CORPORATION.—
 2467 Paragraph (3) of section 9101 of title 31, United States Code, is
 2468 amended by adding at the end the following:

2390 (B) any supplemental information or alternative
 2391 presentation that the Secretary may require; and

2392 (C) an assessment (as of the end of the most
 2393 recent fiscal year of the Administration), signed by the
 2394 chief executive officer and chief accounting or financial
 2395 officer of the Administration, of—

2396 (i) the effectiveness of the internal control
 2397 structure and procedures of the Administration;
 2398 and

2399 (ii) the compliance of the Administration
 2400 with applicable safety and soundness laws.

2401 (3) SPECIAL REPORTS.—The Secretary may require
 2402 the Administrator of the Administration to submit other
 2403 reports on the condition (including financial condition),
 2404 management, activities, or operations of the Administration,
 2405 as the Secretary considers appropriate.

2406 (4) ACCURACY.—Each report of financial condition shall
 2407 contain a declaration by the Administrator of the
 2408 Administration or any other officer designated by the Board
 2409 of Directors of the Administration to make the declaration,
 2410 that the report is true and correct to the best of the
 2411 knowledge and belief of the officer.

2412 (5) AVAILABILITY OF REPORTS.—Reports required
 2413 under this section shall be published and made publicly
 2414 available as soon as is practicable after receipt by the
 2415 Secretary.

2416 (f) SPENDING SAFEGUARDS AND REPORTING.—

2469 “(5) the Clean Energy Deployment
 2470 Administration.”.

2471 **Subtitle B—Nuclear Energy**

2472 **SEC. 411. FINDINGS AND SENSE OF CONGRESS.**

2473 (a) FINDINGS.—Congress makes the following findings:

2474 (1) Nearly all commercial nuclear reactors utilize slow
 2475 thermal neutrons in reactions with uranium fuel, and as a
 2476 result can only initiate fission reactions with the Uranium-
 2477 235 isotope.

2478 (2) Consequently, spent fuel rods from reactors still
 2479 contain 95 percent of the energy contained in the original
 2480 fuel

2481 (3) This open cycle of fuel usage is unsustainable and
 2482 wasteful of the finite uranium resources available on the
 2483 planet.

2484 (4) As a result of the poor energy extraction from
 2485 uranium fuel, the spent nuclear fuel remains dangerously
 2486 radioactive for tens of thousands of years after removal
 2487 from the reactor, requiring complex, secure, multi-
 2488 generational, long-term storage.

2489 (5) The issue of spent nuclear fuel is of grave concern
 2490 given the lack of suitable plans for a long-term storage
 2491 repository, resulting in continually growing stockpiles of
 2492 spent nuclear fuel being stored at on-site at nuclear reactor
 2493 facilities in containment facilities only meant for short-term
 2494 storage.

2495 (6) The on-site storage of this spent nuclear fuel at
 2496 nuclear generating plants poses both potential radiological
 2497 contamination and national security threats.
 2498 (7) Technologies exist to reprocess spent nuclear fuel
 2499 for use in nuclear reactors which utilize fast neutrons for
 2500 fission which ultimately allow for the extraction of over 99
 2501 percent of the energy contained in the original uranium fuel.
 2502 (8) The policies of previous administrations have
 2503 prohibited the reprocessing of nuclear fuel over non-
 2504 proliferation concerns; however, the practice still continues
 2505 in several other nations.
 2506 (9) The current state of technology has progressed
 2507 such that nuclear fuel reprocessing is much more secure to
 2508 the concerns of proliferation: such technologies include
 2509 onsite reprocessing of fuel at nuclear reactor facilities,
 2510 limiting transportation of the fuel, and eliminating the need
 2511 to transport the fuel to long-term storage repositories.
 2512 (b) SENSE OF CONGRESS.—It is the sense of Congress
 2513 that—
 2514 (1) the de facto moratorium the United States is
 2515 observing on the production of fissile materials reprocessing
 2516 of waste nuclear fuel is highly wasteful and incongruent with
 2517 a future powered by clean renewable energy, and energy
 2518 security.
 2519 (2) nuclear energy is a largely under-utilized
 2520 technology and energy source that should be widely
 2521 adopted to help secure the energy independence of the

2575 which the Commission, pursuant to the provisions of
 2576 section 2071 of Chapter 42 United States Code (42
 2577 U.S.C. 2071), determines to be special nuclear
 2578 material, but does not include source material; or
 2579 (B) any material artificially enriched by any of the
 2580 foregoing, but does not include source material.
 2581 (9) SPENT NUCLEAR FUEL.—The term "spent nuclear
 2582 fuel" means fuel that has been withdrawn from a nuclear
 2583 reactor following irradiation, the constituent elements of
 2584 which have not been separated by reprocessing.
 2585 (10) STORAGE.—The term "storage" means retention
 2586 of high-level radioactive waste, spent nuclear fuel, or
 2587 transuranic waste with the intent to recover such waste or
 2588 fuel for subsequent use, processing, or disposal.
 2589 (11) THERMAL REACTOR.—The term "thermal reactor"
 2590 means a nuclear reactor in which nuclear fission of uranium
 2591 isotope 235 is caused by thermal neutrons, or neutrons
 2592 slowed by a moderator with an energy of about 0.025 eV,
 2593 and may include any of the following types of reactors:
 2594 (A) Light water reactors.
 2595 (B) Heavy water reactors.
 2596 (C) Pressurized water reactors.
 2597 (D) Boiling water reactors.
 2598 (12) TRANSURANIC WASTE.—The term "transuranic
 2599 waste" means material contaminated with elements that
 2600 have an atomic number greater than 92, including
 2601 neptunium, plutonium, americium, and curium, and that are

2522 United States while also reducing emissions of greenhouse
 2523 gases.
 2524 (3) instituting a closed nuclear fuel life cycle that
 2525 incorporates fuel reprocessing with a new generation of
 2526 advanced nuclear reactors, will secure the electrical energy
 2527 needs of the United States for decades to come, while
 2528 simultaneously reducing current waste fuel supplies, all
 2529 without the need for additional mining of uranium fuel.
 2530 (4) it is, therefore, within the best interests of the
 2531 United States to adopt strategies to promote the
 2532 development and deployment of fuel reprocessing
 2533 infrastructure along with advanced fast reactors.
 2534 **SEC. 412. DEFINITIONS.**
 2535 (a) In this subtitle:
 2536 (1) CIVILIAN NUCLEAR POWER REACTOR.—The term
 2537 "civilian nuclear power reactor" means a civilian nuclear
 2538 power plant required to be licensed under sections 2133 and
 2539 2134(b) of Chapter 42 United States Code (42 U.S.C. 2133
 2540 and (2134(b))).
 2541 (2) COMMISSION.—The term "Commission" means the
 2542 Nuclear Regulatory Commission.
 2543 (3) DEPARTMENT.—The term "Department" means the
 2544 Department of Energy.
 2545 (4) FAST REACTOR.—The term "fast reactor" means a
 2546 nuclear reactor in which nuclear fissions are caused by fast
 2547 neutrons, or neutrons with a kinetic energy level not less

2602 in concentrations greater than 10 nanocuries per gram, or
 2603 in such other concentrations as the Nuclear Regulatory
 2604 Commission may prescribe to protect the public health and
 2605 safety.
 2606 **SEC. 413. GRANTS FOR ADVANCED FAST REACTOR AND**
 2607 **REPROCESSING RESEARCH.**
 2608 (a) IN GENERAL.—The Secretary of Energy shall establish a
 2609 grant program to encourage the research and development of
 2610 advanced fast reactors and spent nuclear fuel.
 2611 (b) REQUIREMENTS AND PRIORITY.—In making grants
 2612 under this section, the Secretary—
 2613 (1) shall make awards to the proposals for research of
 2614 advanced fast reactor designs capable of the fission either
 2615 uranium or transuranic fuel and that incorporate both active
 2616 and passive safety features; and
 2617 (2) shall make awards to proposals for research in
 2618 technology for spent nuclear fuel reprocessing to produce
 2619 fuel for fast reactors, which maximize safety and security to
 2620 minimize risks of proliferation.
 2621 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
 2622 authorized to be appropriated to carry out this section
 2623 \$5,750,000,000 for the period of fiscal years 2015 through
 2624 2019.
 2625 **SEC. 414. NUCLEAR FUEL REPROCESSING PROGRAM.**
 2626 (a) STUDY.—Not later than 12 months after the date of
 2627 enactment of this Act, the Secretary, in consultation with the
 2628 Commission and the Secretary of the Department of Homeland

2548 than 1 MeV, and may include any of the following types of
 2549 reactors:
 2550 (A) Liquid metal reactors.
 2551 (B) Molten salt reactors.
 2552 (C) Gas-cooled fast reactors..
 2553 (5) PYROMETALLURGICAL PROCESS.—The term
 2554 "pyrometallurgical process" or "pyroprocessing" means any
 2555 high-temperature process by which a mix of transuranic
 2556 elements is extracted from spent nuclear fuel which may
 2557 include the following steps:
 2558 (A) Oxide reduction of spent nuclear fuel.
 2559 (B) Dissolution of metallic fuel in a chemical bath
 2560 for electrorefining.
 2561 (C) Cathode processing to remove residual salts
 2562 and cadmium from refining.
 2563 (6) REPROCESS.—The term "reprocess" means to
 2564 produce special nuclear material from spent nuclear fuel.
 2565 (7) REPROCESSING FACILITY.—The term
 2566 "reprocessing facility" means any equipment or device
 2567 capable of the production of special nuclear material from
 2568 spent nuclear fuel in such quantity as to be of significance
 2569 to the common defense and security, or in such manner as
 2570 to affect the health and safety of the public.
 2571 (8) SPECIAL NUCLEAR MATERIAL.—The term "special
 2572 nuclear material" means:
 2573 (A) plutonium, uranium enriched in the isotope
 2574 233 or in the isotope 235, and any other material

2629 Security, shall submit a report to the Congress on the feasibility
 2630 of establishing a nationwide network of reprocessing facilities
 2631 onsite at civilian nuclear power reactors for the reprocessing of
 2632 spent nuclear fuel for use in fast reactors.
 2633 (1) CONTENTS.—The report shall identify—
 2634 (A) continuing research and development
 2635 challenges and any regulatory or other barriers found
 2636 by the Secretary that hinder the creation of
 2637 reprocessing facilities, as well as recommendations on
 2638 how to encourage and further their deployment; and
 2639 (B) any national security or proliferation of
 2640 nuclear material risks the deployment of reprocessing
 2641 facilities might produce, as well as recommendations
 2642 how to mitigate these risks.
 2643 (b) PILOT PROGRAM.—Not later than 6 months after the
 2644 transmission of the study from subsection (a), the Secretary,
 2645 working in conjunction with the National Laboratories, and the
 2646 Commission will establish a pilot reprocessing facility at
 2647 Argonne National Laboratory to reprocess spent nuclear fuel via
 2648 the pyrometallurgical process as a demonstration of
 2649 capabilities.
 2650 (1) PROCESSING CAPABILITY.—The pilot reprocessing
 2651 plant, once established, shall have at a minimum the
 2652 capability to reprocess 100 tons of spent nuclear fuel per
 2653 year.
 2654 **SEC. 415. BAN ON NEW THERMAL REACTORS.**

2655 (a) IN GENERAL.—Not later than January 1, 2015, the
 2656 Commission shall cease to grant approval for construction or
 2657 licensing of any new thermal reactors or reactors which may
 2658 only utilize low-enriched uranium fuel for civilian nuclear power
 2659 reactors in the United States.
 2660 (b) EXEMPTIONS.—
 2661 (1) Thermal reactors currently under planning or
 2662 construction at the time of the enactment of this Act may be
 2663 approved by the Commission.
 2664 **SEC. 416. NUCLEAR REACTOR CONSTRUCTION**
 2665 **INCENTIVES.**
 2666 (a) DEFINITION.—In this section the term “electric utility”
 2667 means any person, State agency, or Federal agency, which sells
 2668 electric energy.
 2669 (b) IN GENERAL.—Not later than 1 year after the date of
 2670 enactment of this Act, and subject to the availability of
 2671 appropriated funds, the Secretary shall carry out a grant
 2672 program to support the construction and deployment of
 2673 advanced fast reactors.
 2674 (c) APPLICATION.—An electric utility applicant for a grant
 2675 under this subsection shall submit to the Secretary an
 2676 application at such time, in such manner, and containing such
 2677 information as the Secretary may require, including a written
 2678 assurance that—
 2679 (A) all laborers and mechanics employed by
 2680 contractors or subcontractors during construction,
 2681 alteration, or repair that is financed, in whole or in

2682 part, by a loan under this section shall be paid wages
 2683 at rates not less than those prevailing on similar
 2684 construction in the locality, as determined by the
 2685 Secretary of Labor in accordance with section 3141-
 2686 3144, 3146, and 3147 of title 40, United States Code;
 2687 and
 2688 (B) the Secretary of Labor shall, with respect to
 2689 the labor standards described in this paragraph, have
 2690 the authority and functions set forth in Reorganization
 2691 Plan Numbered 14 of 1950 (5 U.S.C. App.) and section
 2692 3145 of title 40, United States Code.
 2693 (d) SELECTION OF ELIGIBLE PROJECTS.—The Secretary
 2694 shall select eligible projects from electric utilities to receive
 2695 grants under this subsection in cases in which, as determined
 2696 by the Secretary, the award recipient—
 2697 (A) is financially viable without the receipt of
 2698 additional Federal funding associated with the
 2699 proposed project;
 2700 (B) will provide sufficient information to the
 2701 Secretary for the Secretary to ensure that the
 2702 qualified investment is expended efficiently and
 2703 effectively;
 2704 (C) will use the funds to construct a civilian
 2705 nuclear power reactor of a fast reactor design
 2706 approved by the Commission with sufficient and
 2707 adequate safeguards, and the ability to utilize
 2708 reprocessed spent nuclear fuel; and

2709 (D) will as part of plans for the construction of the
 2710 civilian nuclear power reactor, include the construction
 2711 of an on-site reprocessing facility to reprocess spent
 2712 nuclear fuel produced from the normal operation of
 2713 the reactor.
 2714 (e) AUTHORIZATION OF APPROPRIATIONS.—There is
 2715 authorized to be appropriated to carry out this section
 2716 \$15,950,000,000 for the period of fiscal years 2015 through
 2717 2025.
 2718 **SEC. 417. RADIOISOTOPE THERMOELECTRIC GENERATOR**
 2719 **MATERIAL PRODUCTION.**
 2720 (a) FINDINGS.—Congress reaffirms the following findings:
 2721 (1) The United States has led the world in scientific
 2722 exploration of space for nearly 50 years.
 2723 (2) Missions such as Viking, Voyager, Cassini, New
 2724 Horizons, and Mare Science Laboratory have greatly
 2725 expanded knowledge of our solar system and planetary
 2726 characteristics and evolution.
 2727 (3) Radioisotope power systems are the only available
 2728 power sources for deep space mission making it possible to
 2729 travel to such distant destinations as Mars, Jupiter, Saturn,
 2730 Pluto, and beyond and maintain operational control and
 2731 systems viability for extended mission durations.
 2732 (4) Current radioisotope power systems supplies and
 2733 production will not fully support NASA mission planned even
 2734 into the next decade and, without a new domestic
 2735 production capability, the United States will no longer have

2736 the means to explore the majority of the solar system by
 2737 the end of this decade.
 2738 (5) Continuing to rely on Russia or other foreign
 2739 sources for radioisotope power system fuel production is not
 2740 a secure option.
 2741 (6) Reestablishing domestic production will require a
 2742 long lead-time. Thus, meeting future space exploration
 2743 mission needs requires that a restart project being at the
 2744 earliest opportunity.
 2745 (b) IN GENERAL.—Pursuant to section 708 of the National
 2746 Aeronautics and Space Administration Authorization Act of 2013
 2747 (1 CYIG L. H11-708), the Secretary, in coordination with the
 2748 Administrator of the National Aeronautics and Space
 2749 Administration, will continue to ensure the domestic production
 2750 of radioisotope thermoelectric generator material for deep
 2751 space and other science exploration missions. The Secretary
 2752 shall take steps to ensure that the nuclear fuel reprocessing
 2753 program established by section 414 takes adequate steps to
 2754 ensure the production of radioisotope thermoelectric generator
 2755 material.
 2756 **SEC. 418. THORIUM FUEL STUDY.**
 2757 Not later than one year after the enactment of this Act, the
 2758 Secretary of Energy shall transmit to the Congress a report
 2759 showing the results of a study on the use of thorium-fueled
 2760 nuclear reactors for national energy needs. Such report shall
 2761 include a response to the International Atomic Energy Agency

2762 study entitled “Thorium fuel cycle - Potential benefits and
 2763 challenges” (IAEA-TECDOC-1450).
 2764 **Subtitle C—Renewable Energy**
 2765 **SEC. 421. SENSE OF CONGRESS.**
 2766 In addition to the expansion of nuclear energy generation,
 2767 to further establish the energy independence and security of
 2768 the United States, other renewable energy sources should be
 2769 supported in growth via the reduction of any regulatory, legal,
 2770 and other gaps and barriers that may hinder their widespread
 2771 deployment.
 2772 **SEC. 422. Definitions.**
 2773 In this subtitle—
 2774 (1) RENEWABLE ELECTRICITY. —The term
 2775 “renewable electricity” shall have the meaning given in
 2776 section 610 of the Public Utility Regulatory Policies Act of
 2777 1978 (16 U.S.C. 2601 et seq.).
 2778 (2) RENEWABLE ENERGY RESOURCE.—The term
 2779 “renewable energy resource” means each of the
 2780 following:
 2781 (A) Wind energy.
 2782 (B) Solar energy.
 2783 (C) Geothermal energy.
 2784 (D) Renewable biomass.
 2785 (E) Biogas derived exclusively from renewable
 2786 biomass.
 2787 (F) Biofuels derived exclusively from
 2788 renewable biomass.

2789 (G) Qualified hydropower.
 2790 (H) Marine and hydrokinetic renewable
 2791 energy, as that term is defined in section 632 of
 2792 the Energy Independence and Security Act of 2007
 2793 (42 U.S.C. 17211).
 2794 **SEC. 423. ENERGY PRODUCTION TARGETS.**
 2795 (a) IN GENERAL.—The Secretary shall take all steps as
 2796 necessary and allowed under the programs established by
 2797 Subtitles A and B to ensure that the electrical energy
 2798 generation from nuclear and renewable energy resources by
 2799 the United States meets the following target percentages as
 2800 prescribed by subsections (b) and (c).
 2801 (b) NUCLEAR ENERGY PRODUCTION TARGETS.—The target
 2802 percentage of electrical energy generation by nuclear energy in
 2803 the United States shall be determined by the following table:

Calendar Year:	Percentage of electrical energy supplied by nuclear energy resources
2020	20.0
2025	21.0
2030	23.0
2035	27.0
2040	33.0
2045	40.0
2050	48.0
2055	52.0

2804 (c) RENEWABLE ENERGY PRODUCTION TARGETS.—The
 2805 target percentage of electrical energy generation by renewable
 2806 energy resources in the United States shall be determined by
 2807 the following table:

Calendar Year:	Percentage of electrical energy supplied by nuclear energy resources
2020	15.0

2025	16.5
2030	18.0
2035	20.0
2040	22.0
2045	24.0
2050	26.0
2055	28.0

2808 (d) MODIFICATION OF REQUIREMENT.—If the Secretary
2809 determines that electric utilities cannot feasibly meet the target
2810 requirements for nuclear and renewable electricity generation
2811 established in subsections (b) and (c) in a specific calendar
2812 year, the Secretary may, by written order, reduce such
2813 requirement for such calendar year to a percentage the
2814 Secretary determines the electric utilities can feasibly meet.
2815 (e) REPORTS.—Not later than April 1, 2013, and each year
2816 thereafter, the Secretary shall provide a report to Congress on
2817 the percentage of electricity production in the United States
2818 that was nuclear or renewable electricity in the previous
2819 calendar year.
2820 **SEC. 424. FEDERAL RENEWABLE ENERGY PURCHASES.**
2821 (f) REQUIREMENT.—For each of calendar years 2015
2822 through 2045, the President shall ensure that, of the total
2823 amount of electricity Federal agencies consume in the United
2824 States during each calendar year, the following percentage
2825 shall be nuclear or renewable electricity:

Calendar Year:	Required Annual Percentage
2015	6.0
2016	13.0
2017	14.5
2018	15.5
2019	17.5
2020	20.0
2021	20.0
2022	23.0
2023	23.0
2024	25.0

2876 recommendation whether to take steps to close the coal power
2877 plant, and replace its electrical generating capacity with a
2878 power plant utilizing nuclear or renewable energy resources.
2879 The recommendation shall be non-binding, however, electric
2880 utilities that choose to follow the Secretary's recommendation
2881 to build a nuclear power plant will be eligible for participation in
2882 the loan guarantee program established by subsection (c).
2883 (c) LOAN GUARANTEE PROGRAM.—The Secretary shall
2884 establish a program to provide guarantees of loans by private
2885 institutions for the construction of civilian nuclear power
2886 reactors.
2887 (1) REQUIREMENTS.—The Secretary may provide a
2888 loan guarantee under this subsection to an applicant if—
2889 (A) the applicant is constructing the civilian
2890 nuclear power reactor under the recommendations of
2891 the Secretary under subsection (b);
2892 (B) the design of the civilian nuclear power
2893 reactor will be of a fast reactor design, and include an
2894 on-site reprocessing facility;
2895 (C) without a loan guarantee, credit is not
2896 available to the applicant under reasonable terms or
2897 conditions sufficient to finance the construction of a
2898 civilian nuclear power reactor described in paragraph
2899 (1);
2900 (D) the prospective earning power of the
2901 applicant and the character and value of the security
2902 pledged provide a reasonable assurance of repayment

2025	25.0
2026 through 2030	28.0
2031 through 2035	30.0
2036 through 2040	35.0
2041 through 2045	40.0
2041 through 2045	45.0

2826 (g) MODIFICATION OF REQUIREMENT.—If the President
2827 determines that the Federal Government cannot feasibly meet
2828 the requirement established in subsection(a) in a specific
2829 calendar year, the President may, by written order, reduce such
2830 requirement for such calendar year to a percentage the
2831 President determines the Federal Government can feasibly
2832 meet.
2833 (h) REPORTS.—Not later than April 1, 2013, and each year
2834 thereafter, the Secretary shall provide a report to Congress on
2835 the percentage of each Federal agency's electricity consumption
2836 in the United States that was renewable electricity in the
2837 previous calendar year.
2838 (i) CONTRACTS FOR RENEWABLE ENERGY.—
2839 (1) Notwithstanding section 501(b)(1)(B) of title
2840 40, United States Code, a contract for the acquisition of
2841 electricity generated from a renewable energy resource
2842 for the Federal Government may be made for a period of
2843 not more than 20 years.
2844 (2) Not later than 90 days after the date of
2845 enactment of this subsection, the Secretary, through the
2846 Federal Energy Management Program, shall publish a
2847 standardized renewable energy purchase agreement,
2848 setting forth commercial terms and conditions, that

2903 of the loan to be guaranteed in accordance with the
2904 terms of the loan; and
2905 (E) the loan bears interest at a rate determined
2906 by the Secretary to be reasonable, taking into account
2907 the current average yield on outstanding obligations of
2908 the United States with remaining periods of maturity
2909 comparable to the maturity of the loan.
2910 (2) CRITERIA.—In selecting recipients of loan
2911 guarantees from among applicants, the Secretary shall give
2912 preference to proposals that—
2913 (A) meet all applicant Federal and State
2914 permitting requirements; and
2915 (B) are most likely to be successful;
2916 (3) MATURITY.—A loan guaranteed under subsection
2917 (a) shall have a maturity of not more than 20 years.
2918 (4) TERMS AND CONDITIONS.—The loan agreement
2919 for a loan guaranteed under this subsection shall provide
2920 that no provision of the loan agreement may be amended or
2921 waived without the consent of the Secretary.
2922 (5) ASSURANCE OF REPAYMENT.—The Secretary shall
2923 require that an applicant for a loan guarantee under this
2924 subsection provide an assurance of repayment in the form
2925 of a performance bond, insurance, collateral, or other
2926 means acceptable to the Secretary in an amount equal to
2927 not less than 20 percent of the amount of the loan.
2928 (6) GUARANTEE FEE.—The recipient of a loan
2929 guarantee under this subsection shall pay the Secretary an

2849 Federal agencies may use to acquire electricity generated
2850 from a renewable
2851 (3) The Secretary shall provide technical assistance
2852 to assist Federal agencies implementing this subsection.
2853 **SEC. 425. COAL POWER PLANT EFFICIENCY ASSESSMENT**
2854 **AND REPLACEMENT.**
2855 (a) IN GENERAL.—Not less than 15 years before the
2856 projected end of lifespan for coal power plants, the electric
2857 utility in ownership of the power plant shall be required to
2858 conduct an assessment of the performance of the power plant
2859 and report the results to the Secretary for review.
2860 (1) EFFICIENCY ASSESSMENT.—The assessment shall
2861 take into account the following factors in comparison with
2862 other nuclear and renewable energy resources:
2863 (A) Electricity generation efficiency of the plant.
2864 (B) Carbon emissions.
2865 (C) Carbon capture and sequestration
2866 investments.
2867 (D) Percentage of carbon emissions captured at
2868 the plant.
2869 (E) Overall environmental impact on the
2870 surrounding region.
2871 (F) Cost of continued operation past lifespan.
2872 (G) Lifetime cost of electricity per kilowatt-hour.
2873 (b) RECOMMENDATION OF CLOSURE.—The Secretary shall
2874 issue a report not later than 6 months after the date of the
2875 acceptance of the report from the electric utility with a

2930 amount determined by the Secretary to be sufficient to
2931 cover the administrative costs of the Secretary relating to
2932 the loan guarantee.
2933 (7) FULL FAITH AND CREDIT.—The full faith and credit
2934 of the United States is pledged to the payment of all
2935 guarantees made under this section. Any such guarantee
2936 made by the Secretary shall be conclusive evidence of the
2937 eligibility of the loan for the guarantee with respect to
2938 principal and interest. The validity of the guarantee shall be
2939 incontestable in the hands of a holder of the guaranteed
2940 loan.
2941 (8) REPORTS.—Until each guaranteed loan under this
2942 section has been repaid in full, the Secretary shall annually
2943 submit to Congress a report on the activities of the
2944 Secretary under this section.
2945 (9) AUTHORIZATION OF APPROPRIATIONS.—There are
2946 authorized to be appropriated such sums as are necessary
2947 to carry out this section.
2948 (10) TERMINATION OF AUTHORITY.—The authority of
2949 the Secretary to issue a loan guarantee under subsection
2950 (a) terminates on the date that is 15 years after the date of
2951 enactment of this Act.
2952 **SEC. 426. INCREASED HYDROELECTRIC GENERATION AT**
2953 **EXISTING FEDERAL FACILITIES.**
2954 (d) IN GENERAL.—The Secretary of the Interior, the
2955 Secretary of Energy, and the Secretary of the Army shall jointly
2956 update the study of the potential for increasing electric power

2957 production capability at federally owned or operated water
 2958 regulation, storage, and conveyance facilities required in
 2959 section 1834 of the Energy Policy Act of 2005.
 2960 (e) CONTENT.—The update under this section shall include
 2961 identification and description in detail of each facility that is
 2962 capable, with or without modification, of producing additional
 2963 hydroelectric power, including estimation of the existing
 2964 potential for the facility to generate hydroelectric power.
 2965 (f) REPORT.—The Secretaries shall submit to the
 2966 Committees on Energy and Commerce, National Resources, and
 2967 Transportation and Infrastructure of the House of
 2968 Representatives and the Committee on Energy and Natural
 2969 Resources of the Senate a report on the findings, conclusions,
 2970 and recommendations of the update of the study under this
 2971 section by not later than 12 months after the date of enactment
 2972 of this Act. The report shall include each of the following:
 2973 (1) The identifications, descriptions, and estimations
 2974 referred to in subsection (b).
 2975 (2) A description of activities currently conducted or
 2976 considered, or that could be considered, to produce
 2977 additional hydroelectric power from each identified facility.
 2978 (3) A summary of prior actions taken by the
 2979 Secretaries to produce additional hydroelectric power from
 2980 each identified facility.
 2981 (4) The costs to install, upgrade, or modify equipment
 2982 or take other actions to produce additional hydroelectric
 2983 power from each identified facility, and the level of Federal

3037 (9) Deployment and integration of advanced electricity
 3038 storage and peak-shaving technologies, including electric,
 3039 plug-in electric, and hybrid electric vehicles, and thermal-
 3040 storage air conditioning.
 3041 (10) Provision to consumers of timeline information
 3042 and control options.
 3043 (11) Development of standards for communication and
 3044 interoperability of appliances and equipment connected to
 3045 the electric grid, including the infrastructure serving the
 3046 grid.
 3047 (12) Identification and lowering of unreasonable or
 3048 unnecessary barriers to adoption of smart grid technologies,
 3049 practices, and services.
 3050 **SEC. 502. UPDATED SMART GRID SYSTEM REPORT.**
 3051 The Secretary, acting through the Assistant Secretary of the
 3052 Office of Electricity Delivery and Energy Reliability (referred to
 3053 in this section as the "OEDER") and through the Smart Grid
 3054 Task Force established in section 1303 of the Energy
 3055 Independence and Security Act of 2007 (42 U.S.C. 17383),
 3056 shall, after consulting with any interested individual or entity as
 3057 appropriate, no later than one year after enactment, and every
 3058 two years thereafter, continue to report to Congress as
 3059 required by section 1302 of the Energy Independence and
 3060 Security Act of 2007 (42 U.S.C. 13782) concerning the statuses
 3061 of smart grid deployments nationwide and any regulatory or
 3062 government barriers to continued deployment. The report shall
 3063 provide the current status and prospects of smart grid

2984 power customer involvement in the determination of such
 2985 costs.
 2986 (5) The benefits that would be achieved by such
 2987 installation, upgrade, modification, or other action, including
 2988 quantified estimates of any additional energy or capacity
 2989 from each facility identified under subsection (b).
 2990 (6) A description of actions that are planned,
 2991 underway, or might reasonably be considered to increase
 2992 hydroelectric power production by replacing turbine
 2993 runners, by performing generator upgrades or rewinds, high
 2994 flow experiments to clear sediment, or by construction of
 2995 pumped storage facilities.
 2996 (7) The impact of increased hydroelectric power
 2997 production on irrigation, water supply, fish, wildlife, Indian
 2998 tribes, river health, water quality, navigation, recreation,
 2999 fishing, and flood control.
 3000 (8) Any additional recommendations to increase
 3001 hydroelectric power production from, and reduce costs and
 3002 improve efficiency at, federally owned or operated water
 3003 regulation, storage, and conveyance facilities.
 3004 **TITLE V—ENERGIZING THE SMART GRID**
 3005 **SEC. 501. STATEMENT OF POLICY AND FINDINGS.**
 3006 It is the policy of the United States to continue to support
 3007 the modernization of the Nation's electricity transmission,
 3008 storage, and distribution system to maintain a reliable and
 3009 secure electricity infrastructure that can meet future growth in
 3010 demand, better accommodate renewable energy generation,

3064 deployment, including information on technology penetration,
 3065 communications network capabilities, costs, and obstacles. It
 3066 may include recommendations for State and Federal policies or
 3067 actions helpful to facilitate the transition to a smart grid. To the
 3068 extent appropriate, it shall take a regional perspective. In
 3069 preparing this report, the Secretary shall solicit advice and
 3070 contributions from the Smart Grid Advisory Committee created
 3071 in section 1303 of the Energy Independence and Security Act of
 3072 2007 (42 U.S.C. 13783); from other involved Federal agencies
 3073 including but not limited to the Federal Energy Regulatory
 3074 Commission ("Commission"), the National Institute of Standards
 3075 and Technology ("NIST"), and the Department of Homeland
 3076 Security; and from other stakeholder groups not already
 3077 represented by the Smart Grid Advisory Committee.
 3078 **SEC. 503. SMART GRID TASK FORCE.**
 3079 Section 1303 of the Energy Independence and Security Act
 3080 of 2007 (42 U.S.C. 13783) is amended as follows:
 3081 (1) In subsection (b) paragraph (2), by striking "shall
 3082 be to" in the first sentence and inserting "shall primarily be
 3083 to generate suggestions of regulations for the Secretary to
 3084 adopt to insure the implementation of smart grid protocols
 3085 as recommended by the Smart Grid Advisory Committee,
 3086 and the adoption of technologies and devices as necessary
 3087 for the Smart grid, as well as to"; and
 3088 (2) In subsection (c), by striking "2020" and inserting
 3089 "2025".

3011 and to achieve each of the following partially outlined in section
 3012 1301 of the Energy Independence and Security Act of 2007 (42
 3013 U.S.C. 17381), which together characterize a Smart Grid:
 3014 (1) Increased use of digital information and controls
 3015 technology to improve reliability, security, and efficiency of
 3016 the electric grid.
 3017 (2) Dynamic optimization of grid operations and
 3018 resources, with full cyber-security.
 3019 (3) Robust and secure operations against all cyber
 3020 threats.
 3021 (4) Deployment and integration of distributed
 3022 resources and generation, including renewable resources.
 3023 (5) Deployment and incorporation of demand
 3024 response, demand-side resources, and energy-efficiency
 3025 resources.
 3026 (6) Deployment of "smart" technologies (real-time,
 3027 automated, interactive, and/or artificially intelligent
 3028 technologies that optimize the physical operation of
 3029 appliances and consumer devices) for metering,
 3030 communications concerning grid operations and status, and
 3031 distribution automation.
 3032 (7) Integration of "smart" appliances and consumer
 3033 devices.
 3034 (8) Deployment and integration of on-grid energy
 3035 storage to accommodate the ephemeral and time-
 3036 dependent energy output of certain renewable resources.

3090 **SEC. 504. FEDERAL MATCHING FUND FOR SMART GRID**
 3091 **INVESTMENT COSTS.**
 3092 (a) MATCHING FUND.—The Secretary shall continue the
 3093 Smart Grid Investment Matching Program established in section
 3094 1306 of the Energy Independence and Security Act of 2007 (42
 3095 U.S.C. 17386) with reimbursement of one-fifth (20 percent) of
 3096 qualifying Smart Grid investments.
 3097 (b) QUALIFYING INVESTMENTS.—Qualifying Smart Grid
 3098 investments include any of the following made on or after the
 3099 date of enactment of this Act and supersede those outline in
 3100 section 1306(b) of the Energy Independence and Security Act
 3101 of 2007 (42 U.S.C. 17386(b)):
 3102 (1) In the case of transmission and distribution
 3103 equipment fitted with monitoring and communication
 3104 devices to enable Smart Grid functions, the documented
 3105 expenditures incurred by the electric utility to purchase and
 3106 install such monitoring and communications devices.
 3107 (2) In the case of metering devices, sensors, control
 3108 devices, and other devices integrated with and attached to
 3109 an electric utility system or retail distributor or marketer of
 3110 electricity that are capable of engaging in Smart Grid
 3111 functions, the documented expenditures incurred by the
 3112 electric utility, distributor, or marketer and its customers to
 3113 purchase and install such devices.
 3114 (3) In the case of software that enables devices or
 3115 computers to engage in Smart Grid functions, the
 3116 documented purchase costs of the software.

3117 (4) In the case of entities that operate or coordinate
 3118 operations of regional electric grids, the documented
 3119 expenditures for purchasing and installing such equipment
 3120 that allows Smart Grid functions to operate and be
 3121 combined or coordinated among multiple electric utilities
 3122 and between that region and other regions.

3123 (5) In the case of persons or entities other than
 3124 electric utilities owning and operating a distributed
 3125 electricity generator, the documented expenditures of
 3126 enabling that generator to be monitored, controlled, or
 3127 otherwise integrated into grid operations and electricity
 3128 flows on the grid utilizing Smart Grid functions.

3129 (6) In the case of electric or hybrid-electric vehicles,
 3130 the documented expenses for devices that allow the vehicle
 3131 to engage in Smart Grid functions (but not the costs of
 3132 electricity storage for the vehicle).

3133 (7) The documented expenditures related to
 3134 purchasing and implementing Smart Grid functions in such
 3135 other cases as the Secretary shall identify. In making such
 3136 grants, the Secretary shall seek to reward innovation and
 3137 early adaptation, even if success is not complete, as well as
 3138 the deployment of proven and commercially viable
 3139 technologies.

3140 (c) INVESTMENTS NOT INCLUDED.—Qualifying Smart Grid
 3141 investments do not include any of the following:

3142 (1) Investments or expenditures for Smart Grid
 3143 technologies, devices, or equipment that are eligible for

3198 threats, including cyber-security threats and terrorism,
 3199 using digital information, media, and devices.

3200 (6) The ability of any appliance or machine to respond
 3201 to such signals, measurements, or communications
 3202 automatically or in a manner programmed by its owner or
 3203 operator without independent human intervention.

3204 (7) The ability to use digital information to operate
 3205 functionalities on the electric utility grid that were
 3206 previously electro-mechanical or manual.

3207 (8) The ability to use digital controls to manage and
 3208 modify electricity demand, enable congestions
 3209 management, assist in voltage control, provide operating
 3210 reserves, and provide frequency regulation.

3211 (9) Such other functions as the Secretary may identify
 3212 as being necessary or useful to the operation of a Smart
 3213 Grid.

3214 (e) SECRETARY.—The Secretary shall—

3215 (A) establish and publish in the Federal Register,
 3216 within one year after the enactment of this Act
 3217 procedures by which applicants who have made
 3218 qualifying Smart Grid investments can seek and obtain
 3219 reimbursement of one-fourth of their documented
 3220 expenditures;

3221 (B) establish procedures to ensure that there is
 3222 no duplication or multiple reimbursement for the same
 3223 investment or costs, that the reimbursement goes to
 3224 the party making the actual expenditures for

3144 specific tax credits or deductions under the Internal
 3145 Revenue Code, as amended.

3146 (2) Expenditures for electricity generation,
 3147 transmission, or distribution infrastructure or equipment not
 3148 directly related to enabling Smart Grid functions.

3149 (3) After the final date for State consideration of the
 3150 Smart Grid Information Standard under section 1307
 3151 (paragraph (17) of section 111(d) of the Public Utility
 3152 Regulatory Policies Act of 1978), an investment that is not
 3153 in compliance with such standard.

3154 (4) After the development and publication by NIST of
 3155 protocols and model standards for interoperability of smart
 3156 grid devices and technologies, an investment that fails to
 3157 incorporate any of such protocols or model standards.

3158 (5) Expenditures for physical interconnection of
 3159 generators or other devices to the grid except those that
 3160 are directly related to enabling Smart Grid functions.

3161 (6) Expenditures for ongoing salaries, benefits, or
 3162 personnel costs not incurred in the initial installation,
 3163 training, or startup of Smart Grid functions.

3164 (7) Expenditures for travel, lodging, meals, or other
 3165 personal costs.

3166 (8) Ongoing or routine operation, billing, customer
 3167 relations, security, and maintenance expenditures.

3168 (9) Such other expenditures that the Secretary
 3169 determines not to be Qualifying Smart Grid Investments by
 3170 reason of the lack of the ability to perform Smart Grid

3225 Qualifying Smart Grid Investments, and that the
 3226 grants made have significant effect in encouraging and
 3227 facilitating the development of a smart grid;

3228 (C) maintain public records of reimbursements
 3229 made, recipients, and qualifying Smart Grid
 3230 investments which have received reimbursements;

3231 (D) establish procedures to provide, in cases
 3232 deemed by the Secretary to be warranted, advance
 3233 payment of moneys up to the full amount of the
 3234 projected eventual reimbursement, to creditworthy
 3235 applicants whose ability to make Qualifying Smart Grid
 3236 investments may be hindered by lack of initial capital,
 3237 in lieu of any later reimbursement for which that
 3238 applicant qualifies, and subject to full return of the
 3239 advance payment in the event that the Qualifying
 3240 Smart Grid investment is not made; and

3241 (E) have and exercise the discretion to deny
 3242 grants for investments that do not qualify in the
 3243 reasonable judgment of the Secretary.

3244 (f) AUTHORIZATION OF APPROPRIATIONS.—There are
 3245 authorized to be appropriated to the Secretary such sums as
 3246 are necessary for the administration of this section and the
 3247 grants to be made pursuant to this section for fiscal years 2014
 3248 through 2020.

3249 **SEC. 505. STATE CONSIDERATION OF SMART GRID.**

3250 Paragraph (16)(A) of section 111(d) of the Public Utility
 3251 Regulatory Policies Act of 1978 (16 U.S.C. 2621(d)(16)(A)) is

3171 functions or lack of direct relationship to Smart Grid
 3172 functions.

3173 (d) SMART GRID FUNCTIONS.—The term "smart grid
 3174 functions" means any of the following:

3175 (1) The ability to develop, store, send and receive
 3176 digital information concerning electricity use, costs, prices,
 3177 time of use, nature of use, storage, or other information
 3178 relevant to device, grid, or utility operations, to or from or
 3179 by means of the electric utility system, through one or a
 3180 combination of devices and technologies.

3181 (2) The ability to develop, store, send and receive
 3182 digital information concerning electricity use, costs, prices,
 3183 time of use, nature of use, storage, or other information
 3184 relevant to device, grid, or utility operations to or from a
 3185 computer or other control device.

3186 (3) The ability to measure or monitor electricity use as
 3187 a function of time of day, power quality characteristics such
 3188 as voltage level, current, cycles per second, or source or
 3189 type of generation and to store, synthesize or report that
 3190 information by digital means.

3191 (4) The ability to sense and localize disruptions or
 3192 changes in power flows on the grid and communicate such
 3193 information instantaneously and automatically for purposes
 3194 of enabling automatic protective responses to sustain
 3195 reliability and security of grid operations.

3196 (5) The ability to detect, prevent, communicate with
 3197 regard to, respond to, or recover from system security

3252 amended by striking "consider requiring" in the first sentence,
 3253 and inserting "require".

3254 **SEC. 506. DOE STUDY OF SECURITY ATTRIBUTES OF**
 3255 **SMART GRID SYSTEMS.**

3256 (a) DOE STUDY.—The Secretary shall review the study
 3257 required by section 1309 of the Energy Security and
 3258 Independence Act of 2008 (42 U.S.C. 17389) and in
 3259 consultation with the Smart Grid Advisory Committee, Smart
 3260 Grid Task Force and adopt regulations and protocols for Smart
 3261 Grid security to ensure each of the following:

3262 (1) The Smart Grid systems help in making the
 3263 Nation's electricity system less vulnerable to disruptions due
 3264 to intentional acts against the system.

3265 (2) The Smart Grid systems help in restoring the
 3266 integrity of the Nation's electricity system subsequent to
 3267 disruptions.

3268 (3) The Smart Grid systems facilitate nationwide,
 3269 interoperable emergency communications and control of the
 3270 Nation's electricity system during times of localized,
 3271 regional, or nationwide emergency.

3272 (4) Mitigation of risks that smart grid systems may, if
 3273 not carefully created and managed, create vulnerability to
 3274 security threats of any sort.

3275 (b) CONSULTATION.—The Secretary shall consult with other
 3276 Federal agencies in the development of these regulations and
 3277 protocols, including but not limited to the Secretary of
 3278 Homeland Security, the Federal Emergency Regulatory

3279 Commission, and the Electric Reliability Organization certified
 3280 by the commission under section 215(c) of the Federal Power
 3281 Act (16 U.S.C. 824o) as added by section 1211 of the Energy
 3282 Policy Act of 2005 (Public Law 109-58; 119 Stat. 941).

3283 **SEC. 507. TRANSMISSION PLANNING AND SITING.**
 3284 (a) IN GENERAL.—Section 216 of the Federal Power Act (16
 3285 U.S.C. 824p) is amended as follows:

3286 (1) In subsection (b), in paragraph (5), by striking “;”
 3287 and inserting a semicolon, in paragraph (6) by striking
 3288 the period and inserting “;” and by adding the following
 3289 at the end thereof:

3290 “(7) the facility is interstate in nature or is an
 3291 intrastate segment integral to a proposed interstate
 3292 facility;”.

3293 (2) In subsection (k), by inserting at the end of the
 3294 following: “Subsections (a), (b), (c), and (h) of this section
 3295 shall not apply in the Western interconnection.”.

3296 (3) In subsections (d) and (e), by striking “subsection
 3297 (b)” in each place and inserting “subsection (b) or section
 3298 216B”, and by striking “permit” and inserting “permit or
 3299 certificate” in each place it appears.

3300 (b) NEW SECTIONS.—The Federal Power Act (16 U.S.C.
 3301 824p) is amended by inserting the following new sections after
 3302 section 216:

3303 **“SEC. 216A. TRANSMISSION PLANNING.**
 3304 “(a) Federal Policy for Transmission Planning.—

3359 environment, natural resources, and land management
 3360 agencies and commissions, Federal power marketing
 3361 administrations, electric utilities, transmission providers,
 3362 load-serving entities, transmission operators, regional
 3363 transmission organizations, independent system operators,
 3364 and other organizations to resolve any conflict or
 3365 competition among proposed planning entities in order to
 3366 build consensus and promote the Federal policy established
 3367 under subsection (a). The Commission shall seek to ensure
 3368 that planning that is consistent with the national electricity
 3369 grid planning principles adopted pursuant to paragraph (1)
 3370 is conducted in all regions of the United States and the
 3371 territories, but in a manner that, to the extent feasible,
 3372 avoids uncoordinated planning by more than one planning
 3373 entity for the same area.

3374 “(4) RELATION TO EXISTING PLANNING POLICY.—In
 3375 implementing the Federal policy established under
 3376 subsection (a), the Commission shall—

3377 “(A) incorporate and coordinate with any
 3378 ongoing planning efforts undertaken pursuant to
 3379 section 217 and Commission Order No. 890;

3380 “(B) coordinate with the Secretary of Energy in
 3381 providing to the regional planning entities an annual
 3382 summary of national energy policy priorities and
 3383 goals;

3384 “(C) coordinate with corridor designation and
 3385 planning functions carried out pursuant to section 216

3305 “(1) OBJECTIVES.—It is the policy of the United
 3306 States that regional electric grid planning should facilitate
 3307 the deployment of renewable and other zero-carbon and
 3308 low-carbon energy sources for generating electricity to
 3309 reduce greenhouse gas emissions while ensuring reliability,
 3310 reducing congestion, ensuring cyber-security, minimizing
 3311 environmental harm, and providing for cost-effective
 3312 electricity services throughout the United States, in addition
 3313 to serving the objectives stated in section 217(b)(4).

3314 “(2) OPTIONS.—In addition to the policy under
 3315 paragraph (1), it is the policy of the United States that
 3316 regional electric grid planning to meet these objectives
 3317 should result from an open, inclusive and transparent
 3318 process, taking into account all significant demand-side and
 3319 supply-side options, including energy efficiency, distributed
 3320 generation, renewable energy and zero-carbon electricity
 3321 generation technologies, smart-grid technologies and
 3322 practices, demand response, electricity storage, voltage
 3323 regulation technologies, high capacity conductors with at
 3324 least 25 percent greater efficiency than traditional ACSR
 3325 (aluminum stranded conductors steel reinforced)
 3326 conductors, superconductor technologies, underground
 3327 transmission technologies, and new conventional electric
 3328 transmission capacity and corridors.

3329 “(b) PLANNING.—

3330 “(1) PLANNING PRINCIPLES.—Not later than 1 year
 3331 after the date of enactment of this section, the Commission

3386 by the Secretary of Energy, who shall provide financial
 3387 support from available funds to support the purposes
 3388 of this section; and

3389 “(D) coordinate with the Secretaries of the
 3390 Interior and Agriculture and Indian tribes in carrying
 3391 out the Secretaries’ or tribal governments’ existing
 3392 responsibilities for the planning or siting of
 3393 transmission facilities on Federal or tribal lands,
 3394 consistent with law, policy, and regulations relating to
 3395 the management of federal public lands.

3396 “(5) ASSISTANCE.—

3397 “(A) IN GENERAL.—The Commission shall
 3398 provide support to and may participate if invited to do
 3399 so in the regional grid planning processes conducted
 3400 by regional planning entities. The Secretary of Energy
 3401 and the Commission may provide planning resources
 3402 and assistance as required or as requested by regional
 3403 planning entities, including system data, cost
 3404 information, system analysis, technical expertise,
 3405 modeling support, dispute resolution services, and
 3406 other assistance to regional planning entities, as
 3407 appropriate.

3408 “(B) AUTHORIZATION.—There are authorized
 3409 to be appropriated such sums as may be necessary to
 3410 carry out this paragraph.

3411 “(6) CONFLICT RESOLUTION.—In the event that
 3412 regional grid plans conflict, the Commission shall assist the

3332 shall adopt, after notice and opportunity for comment,
 3333 national electricity grid planning principles derived from the
 3334 Federal policy established under subsection (a) to be
 3335 applied in ongoing and future transmission planning that
 3336 may implicate interstate transmission of electricity.

3337 “(2) REGIONAL PLANNING ENTITIES.—Not later than
 3338 3 months after the date of adoption by the Commission of
 3339 national electricity grid planning principles pursuant to
 3340 paragraph (1), entities that conduct or may conduct
 3341 transmission planning pursuant to State, tribal, or Federal
 3342 law or regulation, including States, Indian tribes, entities
 3343 designated by States and Indian tribes, Federal Power
 3344 Marketing Administrations, transmission providers,
 3345 operators and owners, regional organizations, and electric
 3346 utilities, and that are willing to incorporate the national
 3347 electricity grid planning principles adopted by the
 3348 Commission in their electric grid planning, shall identify
 3349 themselves and the regions for which they propose to
 3350 develop plans to the Commission.

3351 “(3) COORDINATION OF REGIONAL PLANNING
 3352 ENTITIES.—The Commission shall encourage regional
 3353 planning entities described under paragraph (2) to
 3354 cooperate and coordinate across regions and to harmonize
 3355 regional electric grid planning with planning in adjacent or
 3356 overlapping jurisdictions to the maximum extent feasible.
 3357 The Commission shall work with States, Indian tribes,
 3358 Federal land management agencies, State energy,

3413 regional planning entities in resolving such conflicts in order
 3414 to achieve the objectives of the Federal policy established
 3415 under subsection (a).

3416 “(7) SUBMISSION OF PLANS.—The Commission shall
 3417 require regional planning entities to submit initial regional
 3418 electric grid plans to the Commission not later than 18
 3419 months after the date the Commission promulgates national
 3420 electricity grid planning principles pursuant to paragraph
 3421 (1), with updates to such plans not less than every 3 years
 3422 thereafter. The Commission shall review such plans for
 3423 consistency with the national grid planning principles and
 3424 may return a plan to one or more planning entities for
 3425 further consideration, along with the Commission’s own
 3426 recommendations for resolution of any conflict or for
 3427 improvement.

3428 “(8) INTEGRATION OF PLANS.—Regional electric grid
 3429 plans should, in general, be developed from sub-regional
 3430 requirements and plans, including planning input reflecting
 3431 individual utility service areas. Regional plans may then in
 3432 turn be combined into larger regional plans, up to
 3433 interconnection-wide and national plans, as appropriate and
 3434 necessary as determined by the Commission. In no case
 3435 shall a multi-regional plan impose inclusion of a facility on a
 3436 region that has submitted a valid plan that, after efforts to
 3437 resolve the conflict, does not include such facility. To the
 3438 extent practicable, all plans submitted to the Commission

3439 shall be public documents and available on the
 3440 Commission's Web site.
 3441 "(9) MULTI-REGIONAL MEETINGS.—As regional grid
 3442 plans are submitted to the Commission, the Commission
 3443 may convene multi-regional meetings to discuss regional
 3444 grid plan consistency and integration, including
 3445 requirements for multi-regional projects, and to resolve any
 3446 conflicts that emerge from such multi-regional projects. The
 3447 Commission shall provide its recommendations for
 3448 eliminating any inter-regional conflicts.
 3449 "(10) REPORT TO CONGRESS.—Not later than 3 years
 3450 after the date of enactment of this section and each 3 years
 3451 thereafter, the Commission shall provide a report to
 3452 Congress containing the results of the regional grid planning
 3453 process, including summaries of the adopted regional plans
 3454 and the extent to which the Federal policy objectives in
 3455 subsection (a) have been successfully achieved. The
 3456 Commission shall provide an electronic version of its report
 3457 on its website with links to all regional and sub-regional
 3458 plans taken into account. The Commission shall note and
 3459 provide its recommended resolution for any conflicts not
 3460 resolved during the planning process. The Commission shall
 3461 make any recommendations to Congress on the appropriate
 3462 Federal role or support required to address the needs of the
 3463 electric grid, including recommendations for addressing any
 3464 needs that are beyond the reach of existing State, tribal,
 3465 and Federal authority."

3466 **SEC. 508. SUPPORT FOR QUALIFIED ADVANCED**
 3467 **ELECTRIC TRANSMISSION MANUFACTURING**
 3468 **PLANTS, QUALIFIED HIGH EFFICIENCY**
 3469 **TRANSMISSION PROPERTY, AND QUALIFIED**
 3470 **ADVANCED ELECTRIC TRANSMISSION**
 3471 **PROPERTY.**
 3472 (a) LOAN GUARANTEES.—Section 1703 of the Energy
 3473 Policy Act of 2005 (42 U.S.C. 16513) is amended by adding
 3474 the following new paragraph at the end of subsection (b):
 3475 "(12) The development, construction, acquisition,
 3476 retrofitting, or engineering integration of a qualified
 3477 advanced electric transmission manufacturing plant or
 3478 the construction of a qualified advanced electric
 3479 transmission property (whether by construction of new
 3480 facilities or the modification of existing facilities). For
 3481 purposes of this paragraph, the terms 'qualified
 3482 advanced electric transmission property' and 'qualified
 3483 advanced electric transmission manufacturing plant'
 3484 have the meanings provided by section 1705(a)(5)."
 3485 (b) GRANTS.— The Secretary of Energy is authorized to
 3486 provide grants for up to 50 percent of costs incurred in
 3487 connection with the development, construction, acquisition
 3488 of components for, or engineering of a qualified advanced
 3489 electric transmission property defined in paragraph (5) of
 3490 section 1705(a) of the Energy Policy Act of 2005 (42 U.S.C.
 3491 16515(a)). Such grants may only be made to the first
 3492 project which qualifies under that paragraph. There are

3493 authorized to be appropriated for purposes of this
 3494 subsection not more than \$1,500,000,000 for fiscal years
 3495 2014 through 2018. The United States shall take no equity
 3496 or other ownership interest in the qualified advanced
 3497 electric transmission manufacturing plant or qualified
 3498 advanced electric transmission property for which funding is
 3499 provided under this subsection.

3500 **TITLE VI—EFFECTIVE DATE**

3501 **SEC. 601. EFFECTIVE DATE.**
 3502 This Act and the amendments made by this Act take effect
 3503 on the date that is 1 day after the date of enactment of this
 3504 Act.
 3505

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