

STATE OF NEW YORK

8299

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IN ASSEMBLY

June 6, 2017

Introduced by M. of A. ROSENTHAL -- read once and referred to the
Committee on Environmental Conservation

AN ACT to amend the environmental conservation law and the community
risk and resiliency act, in relation to establishing the New York
state climate responsibility act

The People of the State of New York, represented in Senate and Assem-
bly, do enact as follows:

1 Section 1. This act shall be known and may be cited as the "New York
2 state climate responsibility act".

3 § 2. Legislative findings. The legislature hereby finds and declares
4 that:

5 1. Climate change threatens mankind and the planet. Its negative
6 effects have already been felt in New York with abnormally high temper-
7 atures and extreme storms like Hurricane Sandy, which resulted in 65
8 billion dollars of damage. Future threats to the planet and the state
9 include sea level rise, more frequent and extreme storms, flooding of
10 coastal areas including New York City, heat waves, drought, loss of
11 agricultural production, loss of species and ecosystems, and the
12 increased spread of infectious diseases. These impacts threaten state,
13 national, and world economies, endanger life and property, and jeopard-
14 ize public health and safety. They also place increased strain on exist-
15 ing infrastructure, hinder the delivery of critical services, and foster
16 political instability.

17 2. According to the Intergovernmental Panel on Climate Change and U.S.
18 Global Change Research Program, substantial reductions in greenhouse gas
19 emissions are required by mid-century to limit global warming to no more
20 than 2 degrees Celsius and ideally to no more than 1.5 degrees Celsius
21 compared to pre-industrial levels, and thus avoid the most severe
22 impacts of climate change. Specifically, by 2050 industrialized coun-
23 tries must reduce their greenhouse gas emissions by at least 80 percent
24 below 1990 levels to stay within 2 degrees Celsius. Tackling the climate

EXPLANATION--Matter in italics (underscored) is new; matter in brackets
[-] is old law to be omitted.

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1 crisis requires attention to all greenhouse gases. This includes carbon
2 dioxide produced during the combustion of fossil fuels, as well as meth-
3 ane from natural gas systems that leak or vent to the atmosphere.
4 According to the Intergovernmental Panel on Climate Change, methane is
5 86 times more potent than carbon dioxide as a driver of climate change
6 over a 20 year period.

7 3. Due to the state's continued dependence on fossil fuels, New York
8 is not on track to meet its greenhouse gas reduction goals. Despite
9 growth in wind and solar technology, expansion of electricity generation
10 from natural gas, measured in watt-hours, continues to outpace renewa-
11 bles. Furthermore, fossil fuels continue to be the overwhelmingly domi-
12 nant source of energy for end-user purposes, including transportation
13 and heating.

14 4. In 2016, the New York state public service commission adopted a
15 clean energy standard which seeks to ensure that 50 percent of the
16 state's electricity comes from renewable sources by 2030. However, elec-
17 tricity generation is responsible for only about a quarter of New York's
18 combustion emissions and, if fully implemented, the clean energy stand-
19 ard would reduce those emissions from the electricity sector by only
20 about a quarter of what they are today. This fraction of a fraction
21 represents a small piece of New York's carbon footprint. Furthermore,
22 the clean energy standard program is based on an analysis of future
23 demand that does not account for the necessary conversion of end-use
24 systems. In order to meet statewide greenhouse gas reduction goals, most
25 vehicles and other forms of transportation that burn fossil fuels today
26 must be replaced with those that use electricity. Likewise, millions of
27 heating systems that burn oil or gas will have to be replaced with high-
28 efficiency electric heat pumps. Transportation and onsite uses like
29 heating, together comprise approximately three-quarters of New York's
30 carbon footprint from combustion, so the conversion of these systems
31 will require far more electricity than anticipated by the clean energy
32 standard, likely twice as much or more, to meet the state's "80 percent
33 by 2050" goal. To date, no effort has been made to quantify or plan for
34 this additional generation of electricity, which will also have to be
35 carbon-free.

36 5. In order for New York to meet its greenhouse gas reduction goals, a
37 comprehensive statewide strategy involving the dedicated support of
38 state agencies, the governor, legislature, and private sector is essen-
39 tial--a "Marshall Plan" for climate action. Required is the synchroni-
40 zation of two very complex processes: (1) the scheduled phasing out of
41 fossil fuel power plants and end-user systems, including vehicles, heat-
42 ing systems, and industrial equipment that burn fossil fuels; and (2)
43 the scheduled siting, deployment, and installation of renewables, zero-
44 emission end-user technology, and efficiency improvements at scale and
45 on time to ensure that greenhouse gas reductions occur while meeting
46 demand and maintaining services. Success requires a careful analysis of
47 technological changes that must occur, including both energy supply and
48 demand components, and the development of a timeline for key actions
49 that must take place. Setting goals or emission limits without preparing
50 this kind of plan will not bring about the comprehensive transformation
51 required.

52 6. The New York state climate responsibility act is designed to ensure
53 that state greenhouse gas reduction goals are achieved by establishing a
54 climate action council, made up of relevant state agencies and experts.
55 The primary purpose of the council is to prepare a comprehensive and
56 coherent statewide greenhouse gas reduction plan to serve as the founda-

tion for the coordinated development of rules, regulations, programs, and policies by various agencies. A critical component of this is the planning and scheduling of key actions relating to the phasing out of fossil fuels, including natural gas, and phasing in of carbon-free alternatives. In addition, this act requires that the council prepare an annual status report and update the plan every four years. The intent of this act is to promote inter-agency cooperation and results-oriented action.

7. Actions of the council and its member agencies shall be based on adherence to greenhouse gas emission limits established by the department of environmental conservation in four-year intervals, and consistent with meeting greenhouse gas reduction targets for 2030 and 2050, as set forth in this act. Total statewide and sector-based emission limits shall be set for each type of greenhouse gas.

8. To measure progress accurately and provide for timely adjustments to policy, this act also requires that the department of environmental conservation prepare an annual report on total statewide greenhouse gas emissions. The department's report shall be a comprehensive inventory and assessment, using the best available science and informed by a variety of data on fuel consumption, emission rates from actual sources, peer-reviewed research, and field measurements as appropriate. Unbiased and consistent methodologies shall be used to ensure that findings are valid and reductions are real. The report shall also account for emissions associated with imported electricity. Production of a credible, up-to-date greenhouse gas emissions report is critical for New York to meet its climate goals.

9. Developing a plan to ensure that New York will deliver on its promises of dramatic and consistent greenhouse gas reduction over time will not only benefit the climate and set an example to the world of genuine climate leadership; it will have tremendous environmental, health, economic, and societal benefits.

10. Environmental justice communities are often harmed by the siting of energy infrastructure, with children and the elderly in those communities suffering the most. By phasing out fossil fuel power plants (large and small), pipelines, compressor stations, gas storage facilities, and equipment at industrial facilities that burn fossil fuels, this act particularly benefits environmental justice communities since exposure to the co-pollutants of greenhouse gas emissions would be eliminated. This act also specifically requires that the trading of greenhouse gas or pollutant allowances not disproportionately impact economically disadvantaged communities or communities of color, and it prioritizes measures to reduce co-pollutants in communities with greatest exposure. By focusing on the attainment of greenhouse gas reduction goals, this act seeks to protect all people, regardless of race, nationality, or socioeconomic status. Additionally, by dramatically cutting New York's demand for fossil fuels, this act can help to reduce adverse air and water quality impacts to communities in other states where hydraulic fracturing and other forms of fossil fuel extraction occur.

11. According to the World Health Organization, climate change is expected to cause approximately 250,000 deaths every year between 2030 and 2050, including 38,000 from heat exposure in elderly people, 48,000 from diarrhea, 60,000 from malaria, and 95,000 from childhood malnutrition. The National Institute of Environmental Health Sciences predicts that climate change will cause or exacerbate respiratory and cardiovascular diseases, heat-related morbidity and mortality, stress-related and neurological disorders, developmental delay, foodborne and waterborne

diseases, malnutrition, and disease from vectors or pathogens. The Mount Sinai School of Medicine found that the direct and indirect costs of environmentally mediated illness in New York state total \$4.35 billion annually. By substantially reducing greenhouse gas emissions, New York can help to reduce the severity of these impacts, not only within the state, but globally.

12. The World Health Organization reports that three million people die prematurely every year from airborne pollution. A study by the Massachusetts Institute of Technology found that within the United States, 200,000 premature deaths occur from air pollution annually, 53,000 from vehicle emissions and 52,000 from power generation emissions. In New York City alone, pollution is responsible for 2,300 premature deaths, 4,800 emergency room visits for asthma, and 1,500 hospitalizations annually. In fact, in 2013, deaths from air pollution in New York City exceeded homicides by a factor of eight. Clearly eliminating fossil fuels that are responsible for air pollution, especially within urban areas, is one of the single-most effective ways of saving lives.

13. The economic benefits of achieving energy independence with renewables in New York, rather than relying on fossil fuels from out of state, are tremendous. According to a report published by the University of Massachusetts, for every million dollars spent on energy in the United States, the oil and gas industry creates only 3.7 direct and indirect jobs, while similar investments in wind and solar energy create 9.5 and 9.8 jobs, respectively. In fact, if New York were to switch entirely to renewables for energy, it has been estimated that more than 269,000 permanent jobs could be created. Labor stands to gain significantly from a greenhouse gas reduction plan that is capable of meeting its goals. In order to maximize economic benefits to New Yorkers and encourage the most efficient provision of resources, this act additionally requires that at least 80 percent of the state's electricity, including from renewables, be generated in New York. This act also calls for programs to encourage the manufacture and assembly of renewable energy components in-state.

§ 3. The environmental conservation law is amended by adding a new article 50 to read as follows:

ARTICLE 50
CLIMATE CHANGE

Section 50-0101. Definitions.

50-0103. New York state climate action council.

50-0105. Statewide greenhouse gas emissions report.

50-0107. Statewide greenhouse gas reduction plan.

50-0109. Statewide greenhouse gas emission limits.

50-0111. Greenhouse gas reduction action by the department.

§ 50-0101. Definitions.

As used in this article the following terms shall have the following meanings:

1. "Carbon dioxide equivalent" means the amount of carbon dioxide by mass that would produce the same global warming impact as a given mass of another greenhouse gas over an integrated twenty year time frame after emission, based on the best available science.

2. "Carbon-free source" means a source of energy that, unlike coal, oil, gas, biomass, or garbage incineration, does not produce carbon dioxide emissions.

3. "Co-pollutants" means hazardous air pollutants produced by greenhouse gas emissions sources.

4. "Climate action council" or "council" means the New York state climate action council established pursuant to section 50-0103 of this article.

5. "End-user" means the final consumer of energy in a process of energy production and delivery. End-user systems include equipment such as internal-combustion vehicles that burn gasoline and home furnaces that burn oil or natural gas.

6. "Energy storage" means the storage of energy for future use, typically from intermittent sources of electricity such as renewables. Types of storage include, but are not limited to, batteries, flywheels, compressed air storage, and hydroelectric pumped storage.

7. "Greenhouse gas" means carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and any other substance emitted into the air that contributes to climate change.

8. "Greenhouse gas emissions from the energy sector" means the total emissions of greenhouse gases produced within the state from electricity generation, industry, transportation, and buildings, in addition to greenhouse gas emissions produced outside of the state that are associated with the generation of electricity imported into the state. Greenhouse gas emissions from the energy sector shall not include agricultural emissions from livestock or waste decomposition.

9. "Key actions" means the coordinated set of activities relating to the phase-out of fossil fuels and synchronous deployment of renewables and zero-emission technology, necessary to meet greenhouse gas reduction goals.

10. "Renewable energy" means energy produced from renewable sources such as wind, water, and sunlight.

11. "Statewide greenhouse gas emissions" means the total annual emissions of greenhouse gases produced within the state from anthropogenic sources and greenhouse gas emissions produced outside of the state that are associated with the generation of electricity imported into the state.

12. "Statewide greenhouse gas emission limit" means the maximum allowable level of statewide greenhouse gas emissions in a specified year, as determined by the department pursuant to this article.

13. "Zero-emission technology" means technology for electricity generation, transportation, heating, or other purposes that does not produce direct greenhouse gas emissions during the production or consumption of energy. Zero-emission technology includes devices such as solar panels, electric vehicles, electric heat pumps, machinery powered electricity instead of fossil fuels and induction stoves.

§ 50-0103. New York state climate action council.

1. There is hereby established within the department the New York state climate action council, structured as follows:

(a) The council shall consist of the following twenty-eight members or their designees: the commissioners of the department of transportation, the department of health, the department of economic development, the department of agriculture and markets, the department of housing and community renewal, the department of general services, the department of labor, the department of environmental conservation, and the department of homeland security and emergency services; the chairs of the public service commission and the metropolitan transportation authority; the presidents of the New York state energy research and development authority, the New York power authority, the Long Island power authority; the dormitory authority of the state of New York; the secretary of state; the director of the budget; the superintendent of financial services;

1 the director of state operations; the counsel to the governor; and two
2 at large members appointed by the governor, two at large members
3 appointed by the temporary president of the senate, two at large members
4 appointed by the speaker of the assembly, one at large member appointed
5 by the minority leader of the senate, and one at large member appointed
6 by the minority leader of the assembly.

7 (b) The at large members shall, at all times, include individuals with
8 expertise in climate change, renewable energy and zero-emission technol-
9 ogy, energy efficiency, public health, environmental justice, labor,
10 budget and finance, and industry regulation.

11 (c) Members of the council shall receive no compensation for their
12 services but shall be reimbursed for actual and necessary expenses
13 incurred in the performance of their duties.

14 (d) The chairperson of the council shall be the commissioner of the
15 department or his or her designee.

16 (e) A majority of the members of the council shall constitute a
17 quorum.

18 (f) Any vacancies on the council shall be filled in the manner
19 provided for in the initial appointment.

20 2. (a) The council shall be authorized to convene advisory panels
21 which, at a minimum, shall include a science advisory panel to assist or
22 advise the council in areas requiring special expertise or knowledge.

23 (b) The council shall be authorized to convene subcommittees of member
24 agencies to consider issues and actions affecting sectors of common
25 interest or jurisdiction.

26 3. The department shall provide the council with such facilities,
27 assistance and data as will enable the council to carry out its powers
28 and duties. Additionally, all other agencies of the state or subdivi-
29 sions thereof shall provide the council with such facilities, assist-
30 ance, and data as will enable the council to carry out its powers and
31 duties.

32 4. The council shall consult with federal and state agencies and advi-
33 sory groups as necessary to carry out its duties.

34 5. Meetings of the council, subcommittees, and advisory groups shall
35 be conducted in a transparent fashion and shall be open to the public.

36 6. Members of the council, subcommittees, and advisory groups shall be
37 required to disclose conflicts of interest. Any member who may finan-
38 cially or materially benefit from an award, contract, or other specific
39 action of the council shall recuse himself or herself from voting on
40 such action.

41 7. The council shall have the following powers and duties:

42 (a) To develop a statewide greenhouse gas reduction plan, including
43 subsequent updates and status reports pursuant to section 50-0107 of
44 this article;

45 (b) To advise the department on the development of statewide green-
46 house gas emission limits;

47 (c) To analyze and propose schedules for the coordinated phasing out
48 of energy systems that require fossil fuels, synchronous with the timely
49 deployment of carbon-free alternatives including renewables, zero-emis-
50 sion technology, and efficiency;

51 (d) To evaluate and propose a comprehensive and cohesive set of rules,
52 regulations, programs, and policies for adoption by state agencies to
53 achieve greenhouse gas reduction targets, comply with greenhouse gas
54 emission limits, and achieve the widespread conversion of energy
55 systems; and

1 (e) To make recommendations to the governor, legislature, local
2 governments, institutions, businesses, and the general public regarding
3 action to support efforts of the council and reduce greenhouse gas emis-
4 sions.

5 8. The council shall appoint an independent and impartial ombudsman to
6 facilitate transparent and effective operations of the council and to
7 function as a citizen advocate. The ombudsman shall have demonstrated
8 experience in mediation, conflict resolution and public relations and be
9 selected to avoid conflict of interest. The ombudsman shall assist the
10 council, subcommittees, and advisory panels, but shall not be a member
11 of the council, a subcommittee, or an advisory panel and shall have no
12 vote. The ombudsman shall be appointed, and may be replaced, by majority
13 vote of the council.

14 § 50-0105. Statewide greenhouse gas emissions report.

15 1. No later than one year after the effective date of this article,
16 and each year thereafter, the department shall issue a report on state-
17 wide greenhouse gas emissions, expressed in tons of carbon dioxide
18 equivalents, from all anthropogenic sources in the state, including the
19 relative contribution of each type of greenhouse gas and each type of
20 source to the statewide total.

21 2. The statewide greenhouse gas emissions report shall be a comprehen-
22 sive evaluation, informed by a variety of data, including but not limit-
23 ed to:

24 (a) information relating to the use of fossil fuels by sector, includ-
25 ing for electricity generation, transportation, heating, and other
26 combustion purposes;

27 (b) information relating to fugitive and vented emissions from systems
28 associated with the production, processing, transport, distribution,
29 storage, and consumption of fossil fuels, including natural gas;

30 (c) information relating to emissions from non-fossil fuel sources,
31 including, but not limited to, garbage incinerators, biomass combustion,
32 landfills and landfill gas generators, and anaerobic digesters;

33 (d) information relating to emissions associated with manufacturing,
34 chemical production, cement plants, and other processes that produce
35 non-combustion emissions;

36 (e) information relating to emissions from agricultural operations and
37 livestock; and

38 (f) information from sources that may be required to participate in
39 the registration and reporting system pursuant to subdivision four of
40 this section.

41 3. The statewide greenhouse gas emissions report shall also include an
42 estimate of greenhouse gas emissions associated with the generation of
43 imported electricity which shall be counted as part of the statewide
44 total.

45 4. Within one year after the effective date of this article, the
46 department shall consider establishing a mandatory registry and report-
47 ing system from individual sources to obtain data on greenhouse gas
48 emissions exceeding a particular threshold. If established, such regis-
49 try and reporting system shall apply a consistent reporting threshold to
50 ensure the unbiased collection of data.

51 5. The statewide greenhouse gas emissions report shall utilize best
52 available science and methods of analysis, including the comparison and
53 reconciliation of emission estimates from all sources (both above and
54 below reporting thresholds), fuel consumption, field data, and peer-re-
55 viewed research.

6. The statewide greenhouse gas emissions report shall clearly explain the methodology and analysis used in the department's determination of greenhouse gas emissions. In order to ensure that greenhouse gas emission reductions are real, any changes to such methodology or analysis shall be explained in the report and adjustments made to prior estimates, as needed, to establish a scientifically credible account of change.

7. The department shall seek public input regarding the methodology and analysis used in the determination of statewide greenhouse gas emissions. Meaningful opportunity for public comment on such methodology and analysis shall be provided no later than one year after the effective date of this article, periodically thereafter, and when changes to such methodology and analysis are proposed.

§ 50-0107. Statewide greenhouse gas reduction plan.

1. The New York state climate action council established pursuant to section 50-0103 of this article shall prepare a statewide greenhouse gas reduction plan to ensure that the state meets the following targets:

(a) by two thousand thirty, reduction of annual statewide greenhouse gas emissions from the energy sector by forty percent compared to nineteen hundred ninety levels;

(b) by two thousand fifty, reduction of annual statewide greenhouse gas emissions from all sectors by eighty percent compared to nineteen hundred ninety levels; and

(c) by two thousand fifty, elimination, to the greatest extent feasible, of all greenhouse gas emissions from the energy sector.

2. The purpose of the plan shall be to provide a comprehensive, executable strategy for action by the state and a solid foundation for the coordinated adoption and implementation of rules, regulations, programs, and policies by state agencies to achieve the systematic transformation in energy generation, end-user technology, and efficiency necessary for success.

3. The greenhouse gas reduction plan shall be developed by the council, with coordination by the department, as follows:

(a) the council shall prepare a draft greenhouse gas reduction plan no later than one year after the effective date of this article. The council shall provide meaningful opportunity for public comment on the draft plan and hold at least six public hearings to solicit public comments;

(b) the council shall adopt a final greenhouse gas reduction plan within eighteen months of the effective date of this article;

(c) the council shall update the greenhouse gas reduction plan at least once every four years and shall provide meaningful opportunity for public comment prior to adoption of plan updates; and

(d) the department shall submit the final greenhouse gas reduction plan and updates to the governor, the temporary president of the senate, and the speaker of the assembly and shall post the plan and updates on the department's website.

4. In preparation of the plan, the council shall:

(a) seek the professional input of climate scientists, engineers, economists, and health professionals, in addition to input from the New York Independent System Operator, regulated industry, labor, the environmental justice community, and other stakeholders;

(b) examine and utilize the best available science and economic analysis to evaluate impacts, risks, costs, and benefits of potential action and to determine the best strategy for implementation;

(c) consider all relevant data, studies, and other information, including, but not limited to: (i) the climate action plan interim

1 report dated November ninth, two thousand ten, produced by the climate
2 action council created pursuant to executive order number twenty-four of
3 two thousand nine;

4 (ii) data regarding statewide greenhouse gas emissions and energy
5 consumption within the state by sector and subsector;

6 (iii) studies regarding the global warming potential of methane rela-
7 tive to carbon dioxide, leakage rates, and lifecycle emissions of
8 natural gas;

9 (iv) studies regarding the environmental, economic, health, and socie-
10 tal impacts of climate change and the consequences of continued depend-
11 ency on fossil fuels, including impacts to vulnerable populations;

12 (v) studies regarding the social costs of carbon, the adverse impacts
13 of co-pollutants associated with fossil fuel use, and the job-creation
14 benefits of renewables;

15 (vi) information regarding carbon-free sources of energy, including,
16 but not limited to: renewables; energy efficiency and conservation;
17 energy storage; and zero-emission technology for transportation, heat-
18 ing, and other end-user purposes;

19 (vii) information on land use, agriculture, and forestry practices to
20 reduce greenhouse gas emissions; and

21 (viii) information on regulatory, financial, and economic techniques
22 to reduce greenhouse gas emissions, including, but not limited to:
23 incentive programs; rebates; tax deductions; the purchase of renewable
24 energy credits; cap-and-trade programs; and carbon fee/dividend
25 programs.

26 5. To ensure that greenhouse gas reduction targets and emission limits
27 are achievable the council shall quantitatively analyze and propose
28 schedules for key actions that must take place at scale and on time to
29 substantially reduce greenhouse gas emissions from the largest contrib-
30 uting sectors. The greenhouse gas reduction plan shall analyze and
31 propose schedules for:

32 (a) the widespread conversion of end-user systems that rely on fossil
33 fuels to zero-emission technology for purposes including, but not limit-
34 ed to, transportation, heating and industry;

35 (b) the deployment of additional electricity from carbon-free sources
36 necessary to support the widespread conversion of end-user systems that
37 rely on fossil fuels and eliminate fossil fuels as a source of electric-
38 ity generation. The plan shall include an analysis of additional elec-
39 tricity measured in gigawatt-hours annually that will be required from
40 carbon-free sources, with attention to the necessary distribution and
41 diversification of generators. Taking the need for additional electric-
42 ity into account, the plan shall also include an analysis of changes
43 needed to the New York state clean energy standard to ensure that the
44 statewide greenhouse gas reduction targets and emission limits can be
45 met;

46 (c) the widespread incorporation of expanded efficiency measures in
47 new construction, existing buildings, and industrial processes;

48 (d) necessary improvements to the electrical grid and related infras-
49 tructure, including energy storage, to support the widespread deployment
50 of renewables and increased demand for electricity; and

51 (e) the phase-out of existing power plants and other facilities that
52 produce greenhouse gas emissions, synchronous with other key actions.

53 6. To support the creation of in-state jobs in renewable energy,
54 promote locally-produced power, and provide for the most efficient tran-
55 smission of electricity, the council shall, in its analysis and develop-
56 ment of schedules pursuant to subdivision five of this section, ensure

1 that at least eighty percent of electricity consumed in the state annu-
2 ally is produced in-state.

3 7. The greenhouse gas reduction plan shall evaluate and propose rules,
4 regulations, programs, and policies for state agencies to meet the
5 greenhouse gas reduction targets identified in subdivision one of this
6 section and the greenhouse gas emission limits established by the
7 department pursuant to section 50-0109 of this article. In considering
8 potential actions, the council shall:

9 (a) prioritize activities requiring a high level of planning and
10 interagency coordination, including key actions and schedules identified
11 in subdivision five of this section;

12 (b) prioritize measures to maximize net reduction of greenhouse gas
13 emissions statewide and reduce co-pollutants to communities with great-
14 est exposure;

15 (c) evaluate the feasibility, logistics, and costs of implementing all
16 greenhouse gas reduction measures, and the amount of reductions antic-
17 ipated to result;

18 (d) evaluate both regulatory and programmatic approaches, including,
19 but not limited to, performance standards or market-based programs that
20 involve the procurement of energy or emission credits, cap-and-trade
21 programs, and carbon fee/dividend programs;

22 (e) evaluate foreseeable technical, economic, legal, and regulatory
23 challenges or barriers to the elimination of greenhouse gas emissions
24 from specific sectors or subsectors, including potential impacts to
25 greenhouse gas reduction targets;

26 (f) identify funding and resource needs; and

27 (g) ensure that actions are equitable, cost-effective, and encouraging
28 of early action.

29 8. The greenhouse gas reduction plan shall identify and target for
30 elimination existing programs and policies that hinder the reduction of
31 greenhouse gas emissions, encourage the consumption of fossil fuels, or
32 facilitate the expansion of fossil fuel infrastructure.

33 9. The council shall carefully consider the short- and long-term
34 impacts and financial burdens that may be placed on economically disad-
35 vantaged individuals and communities by implementation of the greenhouse
36 gas reduction plan. The council shall ensure that proposed rules, regu-
37 lations, programs, and policies include provisions to limit or offset
38 such impacts, such as financial assistance or other forms of support.
39 The council also shall ensure that the implementation of all programs
40 involving the purchase or exchange of emission and pollutant allowances
41 are equitable and do not disproportionately adversely affect econom-
42 ically disadvantaged communities, the elderly, children, or communities
43 of color.

44 10. In considering rules, regulations, programs, and policies, the
45 department and members of the council with authority or expertise in
46 energy production and delivery, including the New York state energy
47 research and development authority, the public service commission, the
48 New York power authority, and the Long Island power authority, shall
49 evaluate and propose:

50 (a) modifications of the New York State clean energy standard to
51 ensure the procurement of sufficient electricity from carbon-free sourc-
52 es, consistent with the greenhouse gas reduction schedule adopted by the
53 department pursuant to section 50-0109 of this article for all sectors,
54 and taking into account the increased demand for electricity caused by
55 the electrification of end-user systems;

1 (b) additional or expanded programs necessary to facilitate the devel-
2 opment of sufficient electricity from carbon-free sources, improvements
3 to the electrical grid, and energy storage to support the widespread
4 deployment of renewables;

5 (c) policies to restrict the approval of new sources of electricity
6 generation from fossil fuels and the combustion of materials which
7 produce greenhouse gas emissions;

8 (d) policies to provide for the orderly phase-out of existing fossil
9 fuel power plants; and

10 (e) policies to limit the expansion of fossil fuel infrastructure to
11 the extent possible by federal and state law, and provide for the phas-
12 ing-out of existing fossil fuel infrastructure.

13 11. In considering rules, regulations, programs, and policies, the
14 department and members of the council with authority or expertise in
15 residential, commercial, and industrial sectors, including, but not
16 limited to, the New York state energy research and development authori-
17 ty, department of state, and division of housing and community renewal,
18 shall evaluate, and as appropriate, propose:

19 (a) development of and revision to building codes, including the state
20 energy construction code, to require higher standards for energy effi-
21 ciency and the installation of zero-emission technology, such as elec-
22 tric heat pumps, electric heat pump water heaters, and electric or
23 induction stoves for new construction and redevelopment;

24 (b) restrictions on the future sale and use of heating systems and
25 appliances that require fossil fuels or produce greenhouse gas emis-
26 sions, and requirements for the purchase of heating systems and appli-
27 ances that produce zero emissions;

28 (c) requirements for the retrofit of existing buildings to improve
29 energy efficiency and conversion of existing systems to zero-emission
30 technology, such as a condition of sale, purchase, or financing;

31 (d) requirements for the use of or conversion to zero-emission equip-
32 ment and machinery in industrial applications; and

33 (e) monetary incentives and disincentives affecting energy use in
34 buildings and industrial applications, including, but not limited to,
35 purchase fees for equipment and appliances that produce greenhouse gas
36 emissions and rebates or tax deductions for the purchase of zero-emis-
37 sion equipment and appliances. The department and members of the council
38 shall evaluate and propose such incentives or disincentives in coordi-
39 nation with agencies having financial and budgetary expertise including,
40 but not limited to, the department of financial services and the depart-
41 ment of taxation and finance.

42 12. In considering rules, regulations, programs, and policies, the
43 department and members of the council with authority or expertise in the
44 transportation sector, including, but not limited to, the department of
45 transportation, shall evaluate and, as appropriate, propose:

46 (a) development of more stringent emission standards for vehicles and
47 other modes of transportation;

48 (b) restrictions on the future sale and/or use of vehicles by class
49 and emission level to ensure that greenhouse gas emission limits are
50 achieved and provide for the phased-in conversion of existing modes of
51 transportation to zero-emission technology;

52 (c) monetary incentives and disincentives regarding vehicular use,
53 including, but not limited to sales fees for vehicles that produce
54 greenhouse gas emissions, rebates or tax deductions for the purchase of
55 zero-emission vehicles, and a higher sales tax on motor vehicle fuels.
56 The department and members of the council shall evaluate and propose

1 incentives or disincentives in coordination with agencies having finan-
2 cial and budgetary expertise such as the department of financial
3 services and the department of taxation and finance;

4 (d) requirements for the phased-in use of zero-emission vehicles for
5 all government vehicle fleets and public transportation;

6 (e) programs to further encourage the use of mass transit in cooper-
7 ation with public transit providers;

8 (f) programs to facilitate the timely conversion of transportation
9 infrastructure, including the development of recharging and refueling
10 stations for zero-emission vehicles, with consideration given to the
11 type, location, and number of facilities;

12 (g) requirements to ensure that hydrogen fueling and distribution
13 stations do not offer hydrogen that is derived from natural gas or other
14 fossil fuels;

15 (h) programs for the electrification of railway transportation; and

16 (i) programs to require or encourage the research, development, and
17 use of synthetic fuels and biofuels for aircraft if shown to reduce
18 total greenhouse gas emissions.

19 13. In considering rules, regulations, programs, and policies, the
20 department, in coordination with the department of agriculture and
21 markets, shall evaluate and propose:

22 (a) meaningful limits on the use of fertilizer, including, but not
23 limited to, synthetically produced nitrogen and meaningful limits on the
24 use of petroleum-based pesticides;

25 (b) implementation of improved soil rotation and tilling practices;

26 (c) requirements or incentives for reducing methane emissions from
27 livestock, such as with dietary improvements;

28 (d) improvement of waste management practices and use of anaerobic
29 digestion to capture methane for energy generation if shown to reduce
30 total greenhouse gas emissions;

31 (e) programs to encourage the shared use of agricultural lands for the
32 on-site production of electricity from solar or wind energy; and

33 (f) forestry best management practices and programs to encourage
34 reforestation to sequester carbon.

35 14. The council also shall reduce greenhouse gas emissions and co-pol-
36 lutants from existing sources to the greatest extent possible prior to
37 their elimination. As part of the greenhouse gas reduction plan, the
38 department, in coordination with the New York state research and devel-
39 opment authority, public service commission, and other agencies shall
40 evaluate and propose rules, regulations, programs and policies to:

41 (a) identify sources of natural gas leakage and inferior design prac-
42 tices that allow leakage or intentional venting of natural gas systems,
43 including, but not limited to: pipelines; power plants; compressor
44 stations; metering stations; gas storage facilities; and distribution
45 networks;

46 (b) require the use of best available technology, including, but not
47 limited to: vapor recovery; oxidation catalysts; zero-emission dehydra-
48 tors; and blowdown prevention;

49 (c) prioritize sources of leakage within natural gas systems for
50 modification, repair, replacement, or removal; and

51 (d) implement a comprehensive leakage monitoring program and consider
52 additional fines and penalties to reduce incidents of leakage.

53 15. The council shall evaluate the adverse impacts of energy
54 production associated with the combustion of non-fossil fuel materials,
55 including, but not limited to, biomass and solid waste. Such evaluation
56 shall consider factors including, but not limited to, the production of

1 greenhouse gas emissions and hazardous pollutants, the energy density of
2 materials, time periods of carbon combustion and recapture, public
3 health, land use, and ecological impacts. As part of the greenhouse gas
4 reduction plan, the council shall propose changes, as necessary, to
5 rules, regulations, programs, and policies affecting such fuel sources
6 to ensure compliance with greenhouse gas emission limits, protection of
7 public health, and protection of the environment.

8 16. The greenhouse gas reduction plan shall protect and improve access
9 by residents, businesses, institutions, and municipalities to behind-
10 the-meter and off-grid generation of electricity from renewables. The
11 greenhouse gas reduction plan shall:

12 (a) investigate trends and proposed changes in regulatory policies and
13 utility practices that limit net metering and discourage access to and
14 expansion of behind-the-meter electricity generation;

15 (b) evaluate the effect that reduced incentives, including the phas-
16 ing-out of rebates and tax deductions, have had on the deployment of
17 renewables by residents, businesses, and municipalities within the
18 state; and

19 (c) propose rules, regulations, programs and policies that encourage
20 and accelerate the development of behind-the-meter and off-grid gener-
21 ation of electricity from renewables.

22 17. The greenhouse gas reduction plan shall examine barriers and
23 opportunities for access to renewable energy and energy efficiency
24 resources by economically disadvantaged individuals and communities. The
25 council, as part of the plan, shall evaluate and propose ways of improv-
26 ing ownership and access to services and commodities, including, but not
27 limited to:

28 (a) distributed renewable energy generation;

29 (b) energy efficiency and weatherization investments;

30 (c) zero-emission and low-emission transportation, including mass
31 transit;

32 (d) adaptation measures to improve the resilience of homes and local
33 infrastructure to the impacts of climate change; and

34 (e) other services and infrastructure that can reduce the risks of and
35 exposure to climate-related hazards.

36 18. The council, in coordination with the department of economic
37 development, the department of labor, and other agencies, as part of the
38 greenhouse gas reduction plan, shall examine and propose strategies for
39 the creation of businesses and jobs in renewable energy, energy effi-
40 ciency, and zero-emission technologies including, but not limited to:

41 (a) examination and implementation of incentives for companies
42 involved in the manufacturing, installation, and maintenance of renewa-
43 bles, energy efficiency, and zero-emission technology to locate in the
44 state, particularly those involved in the manufacture and assembly of
45 system components;

46 (b) development of partnerships with universities and colleges, such
47 as expansion of the START-UP New York program, to support entrepreneur-
48 ship and research in renewables, energy efficiency, and zero-emission
49 technology;

50 (c) support for apprenticeship programs and other forms of on-site
51 training; and

52 (d) support for retraining of workers employed in the fossil fuel
53 industry for future work with renewables, energy efficiency, and zero-
54 emission technology.

55 19. The council, in coordination with the department and other agen-
56 cies, as part of the greenhouse gas reduction plan, shall develop crea-

1 tive strategies for educating the public about the significance of
2 climate change and the importance of swift, meaningful action to reduce
3 greenhouse gas emissions from all sectors. Such strategies shall include
4 a focus on fostering necessary support and cooperation by local govern-
5 ments, businesses, and the general public for major changes that will be
6 necessary to substantially reduce greenhouse gas emissions, including
7 the widespread deployment of renewables and the elimination of fossil
8 fuels for purposes such as transportation and heating.

9 20. The greenhouse gas reduction plan and council shall:

10 (a) recommend specific actions by the governor and legislature, such
11 as additional legislation, authorizations, and funding, to support
12 efforts of the council, reduce greenhouse gas emissions, and pursue
13 carbon-free alternatives, consistent with greenhouse gas emission limits
14 adopted pursuant to this article; and

15 (b) recommend actions that can be taken by local governments, insti-
16 tutions, businesses, and the general public to reduce greenhouse gas
17 emissions and pursue carbon-free alternatives.

18 21. The council, in coordination with the department, shall publish an
19 annual status report regarding implementation of the greenhouse gas
20 reduction plan. At a minimum, the status report shall:

21 (a) compare changes in greenhouse gas emissions statewide and by
22 sector from the department's annual greenhouse gas emissions report to
23 greenhouse gas emission limits established pursuant to section 50-0109
24 of this article to determine whether emission limits have been achieved
25 or are likely to be achieved on time;

26 (b) compare the status of key actions identified in subdivision five
27 of this section to schedules identified in the greenhouse gas reduction
28 plan to determine if such key actions have been achieved or are likely
29 to be achieved on time;

30 (c) assess progress made by the department and other agencies toward
31 the implementation of rules, regulations, programs and policies pursuant
32 to section 50-0111 of this article and section four of the chapter of
33 the laws of two thousand seventeen which added this article;

34 (d) evaluate costs of compliance to regulated entities, the public,
35 and state agencies;

36 (e) assess whether predicted environmental, economic, public health,
37 and social benefits of actions taken are being realized;

38 (f) evaluate whether regulations or other greenhouse gas reduction
39 measures undertaken are equitable, minimize costs, maximize benefits,
40 and encourage early action;

41 (g) assess efforts to improve access to renewable energy and energy
42 efficiency resources by economically disadvantaged communities; and

43 (h) recommend as necessary, additional actions to comply with green-
44 house gas emission limits, corrective actions to address aspects of the
45 greenhouse gas reduction plan that are not on schedule, and revisions to
46 the plan as appropriate.

47 22. The department shall submit the annual status report required by
48 subdivision twenty-one of this section to the governor, the temporary
49 president of the senate, and the speaker of the assembly, and shall post
50 the annual status report on the department's website.

51 § 50-0109. Statewide greenhouse gas emission limits.

52 1. (a) No later than eighteen months after the effective date of this
53 article, the department shall establish a schedule for the reduction of
54 statewide greenhouse gas emissions to meet the targets identified in
55 section 50-0107 of this article.

1 (b) The department shall adopt specific statewide greenhouse gas emis-
2 sion limits for two thousand twenty-two, two thousand twenty-six, two
3 thousand thirty, two thousand thirty-four, two thousand thirty-eight,
4 two thousand forty-two, two thousand forty-six, and two thousand fifty;

5 (c) Greenhouse gas emission limits shall be measured in units of
6 carbon dioxide equivalents and identified for each individual type of
7 greenhouse gas, including, at a minimum, carbon dioxide, methane, and
8 nitrous oxide;

9 (d) The schedule adopted by the department shall ensure that for every
10 four-year period, the limit established for each greenhouse gas is
11 successively smaller than the previous four-year period and smaller than
12 the level reported by the department in the greenhouse gas emissions
13 report for the year two thousand twenty.

14 2. The department shall base its determination of greenhouse gas emis-
15 sion limits on findings of the council, including the feasibility of key
16 actions contained in the statewide greenhouse gas reduction plan identi-
17 fied in subdivision five of section 50-0107 of this article.

18 3. The department, in consultation with the council, shall adopt
19 greenhouse gas emission limits for specific sectors or subsectors, as
20 appropriate. The department, in consultation with the council, shall
21 ensure that for each type of greenhouse gas, the combination of emission
22 limits for all sectors or subsectors in each four-year period does not
23 exceed the total statewide emission limit for the same four-year period.

24 4. The emission limits established by the department shall serve as
25 the basis for developing the greenhouse gas reduction plan adopted by
26 the council and for rules, regulations, programs, and policies adopted
27 by the department and other state agencies.

28 § 50-0111. Greenhouse gas reduction action by the department.

29 1. No later than two years after the effective date of this article,
30 and as necessary thereafter, the department, after public workshops and
31 at least two opportunities for public comment and hearing, shall promul-
32 gate rules, regulations, programs and policies to meet the greenhouse
33 gas reduction targets set forth in section 50-0107 of this article and
34 to ensure compliance with greenhouse gas emission limits adopted by the
35 department pursuant to section 50-0109 of this article. The department
36 shall also modify or repeal programs or policies that hinder the
37 reduction of greenhouse gas emissions, encourage the consumption of
38 fossil fuels, or facilitate the expansion of fossil fuel infrastructure.

39 2. The provisions of this section shall be broadly interpreted to
40 provide for the adoption and enforcement of measures necessary to meet
41 greenhouse gas reduction targets and greenhouse gas emission limits
42 without limitation by existing state implementation plans, other agree-
43 ments pertaining to the regulation and permitting of emissions, or
44 conditions set forth in permits issued by the department.

45 3. The department shall ensure that rules, regulations, programs, and
46 policies promulgated pursuant to this article are substantially consist-
47 ent with recommendations and proposals of the greenhouse gas reduction
48 plan adopted by the council pursuant to section 50-0107 of this article.

49 4. The department, in coordination with the council, shall ensure that
50 rules, regulations, programs, and policies promulgated by the department
51 pursuant to this section harmonize with actions taken by other agencies
52 pursuant to section four of the chapter of the laws of two thousand
53 seventeen which added this article. The department shall ensure that the
54 achievement of greenhouse gas emissions reductions are real, permanent,
55 quantifiable, verifiable, and enforceable.

1 5. Rules, regulations, programs, and policies adopted pursuant to this
2 section shall be reviewed annually and updated as necessary, based on
3 revisions to the greenhouse gas reduction plan and annual status reports
4 prepared by the council.

5 § 4. Greenhouse gas reduction action by other state agencies. 1. The
6 New York state energy research and development authority, the department
7 of environmental conservation, the department of health, the department
8 of transportation, the department of state, the department of economic
9 development, the department of agriculture and markets, the department
10 of financial services, the department of public service, the office of
11 general services, the division of housing and community renewal, the
12 public utility authorities established pursuant to titles 1, 1-A, 1-B,
13 11, 11-A, 11-B, 11-C and 11-D of article 5 of the public authorities
14 law, and any other state agency may promulgate rules, regulations,
15 programs, and policies to achieve statewide greenhouse gas emission
16 limits and implement the greenhouse gas reduction plan described in
17 article 50 of the environmental conservation law, provided that no such
18 action shall limit the authority of the department of environmental
19 conservation to regulate and control greenhouse gas emissions pursuant
20 to article 50 of the environmental conservation law.

21 2. No later than two years after the effective date of the chapter of
22 the laws of two thousand seventeen which added this section, and as
23 necessary thereafter, agencies with representation on the climate action
24 council established pursuant to section 50-0103 of the environmental
25 conservation law, after at least two opportunities for public comment
26 and hearing, shall promulgate rules, regulations, programs, and policies
27 as appropriate to meet greenhouse gas reduction targets and ensure
28 compliance with greenhouse gas emission limits adopted by the department
29 of environmental conservation pursuant to article 50 of the environ-
30 mental conservation law. Such agencies shall also modify or repeal
31 programs or policies that hinder the reduction of greenhouse gas emis-
32 sions, encourage the consumption of fossil fuels, or facilitate the
33 expansion of fossil fuel infrastructure.

34 3. Agencies shall ensure that rules, regulations, programs, and poli-
35 cies promulgated pursuant to this section are substantially consistent
36 with recommendations and proposals of the greenhouse gas reduction plan
37 adopted by the climate action council pursuant to section 50-0107 of the
38 environmental conservation law.

39 4. In coordination with the climate action council, established pursu-
40 ant to section 50-0103 of the environmental conservation law, agencies
41 shall ensure that rules, regulations, programs, and policies promulgated
42 pursuant to this section harmonize with actions taken by the department
43 of environmental conservation pursuant to section 50-0111 of the envi-
44 ronmental conservation law and actions taken by other agencies pursuant
45 to this section. Agencies shall ensure that the achievement of green-
46 house gas emission reductions are real, permanent, quantifiable, verifi-
47 able, and enforceable.

48 5. Rules, regulations, programs, and policies adopted pursuant to this
49 section shall be reviewed annually and updated as necessary based on
50 revisions to the greenhouse gas reduction plan and annual status reports
51 prepared by the climate action council established by article 50 of the
52 environmental conservation law.

53 § 5. Administrative decisions relating to climate change by state
54 agencies. 1. All state agencies shall assess and implement strategies to
55 reduce their greenhouse gas emissions.

2. In considering and issuing permits, licenses, and other administrative approvals and decisions, state agencies, offices, authorities, and divisions shall ensure that such approvals and decisions support the attainment of statewide greenhouse gas emission limits established pursuant to article 50 of the environmental conservation law and are consistent with the greenhouse gas reduction plan prepared by the climate action council pursuant to such article.

3. In considering and issuing permits, licenses, and other administrative approvals and decisions, state agencies, offices, authorities, and divisions shall not disproportionately impact communities that are economically disadvantaged or bear higher burdens of negative public health, environmental pollution, or impacts of climate change.

§ 6. Chapter 355 of the laws of 2014 constituting the community risk and resiliency act is amended by adding two new sections 17-a and 17-b to read as follows:

§ 17-a. The department of environmental conservation shall take actions to promote climate change adaptation and resilience, including:

1. Actions to help state agencies and other entities assess the reasonably foreseeable risks of climate change on any proposed projects, taking into account issues such as sea level rise, tropical and extra-tropical cyclones, storm surges, flooding, wind, changes in average and peak temperatures, changes in average and peak precipitation, public health impacts, and impacts on species and other natural resources;

2. Assessing significant climate-related risks, taking into account the probability of occurrence, the magnitude of the potential harm, and the uncertainty of risk;

3. Measures that could mitigate significant climate-related risks, as well as a cost-benefit analysis and implementation of such measures.

§ 17-b. Permits for the regulatory programs of subdivision 3 of section 50-0107 of the environmental conservation law shall require applicants to demonstrate that future physical climate risk has been considered and that proposed activities do not interfere with the attainment of greenhouse gas emission limits established pursuant to article 50 of the environmental conservation law and implementation of the greenhouse gas reduction plan adopted by the climate action council pursuant to such article. In reviewing such information the department of environmental conservation may require the applicant to mitigate significant risks to public infrastructure and/or services, private property not owned by the applicant, adverse impacts on communities, and/or natural resources in the vicinity of the project.

§ 7. Nothing in this act shall limit the existing authority of a state entity to adopt and implement greenhouse gas emissions reduction measures.

§ 8. Nothing in this act shall relieve any person, entity, or public agency of compliance with other applicable federal, state, or local laws or regulations, including state air and water quality requirements, and other requirements for protecting public health or the environment.

§ 9. Severability. If any word, phrase, clause, sentence, paragraph, section, or part of this act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, or invalidate the remainder thereof, but shall be confined in its operation to the word, phrase, clause, sentence, paragraph, section, or part thereof directly involved in the controversy in which such judgment shall have been rendered.

§ 10. This act shall take effect immediately.