

# Avangrid, Inc.



## EEI and AGA



# ESG/Sustainability Reporting



# LETTER FROM OUR CEO

## AVANGRID, investing in a new generation of energy



AVANGRID is leading the transformation to a competitive, clean energy future. This goes hand in hand with our commitment to safeguard the environment, reduce our generation carbon footprint, and grow as a sustainable company in our investments, actions and culture.

As a member of Edison Electric Institute (EEI) and American Gas Association (AGA), AVANGRID is pleased to provide investors voluntary information about our environmental, social and governance (ESG) and Sustainability for 2018 using the EEI and AGA reporting templates, which provides investors and other stakeholders ESG and sustainability information that is consistent across the electric and gas utilities sectors.

We are proud to have one of the lowest generation carbon emissions intensities among energy companies in the United States, and we are committed to being an industry leader as we invest in innovation to bring smart energy solutions to our customers.. Our efforts go beyond stewardship for the environment and management of natural resources. We also view sustainability as a commitment to help our communities thrive and foster strong partnerships to develop forward-thinking initiatives. Above all, we are committed to the highest standards of safety, ethics and corporate governance to ensure the long-term sustainability of our business and value creation for all of our stakeholders.

We will continue to execute on our growth strategy and deliver a more accessible clean energy model that promotes healthier, more sustainable communities every day. For additional information about AVANGRID and our economic, social, environmental goals and achievements during 2018, we encourage you to read our Sustainability Report for 2018 available at [www.avangrid.com](http://www.avangrid.com).

Sincerely,

James P. Torgerson  
Chief Executive Officer

# SUSTAINABILITY GOVERNANCE

Sustainability is firmly entrenched in the purpose and values that guide our board of directors, and respect for people, safety, communities and the environment are key priorities driving our business success. AVANGRID has incorporated the Sustainable Development Goals (SDGs) approved by the member states of the United Nations into the company's strategy and governance system. In line with this principle, AVANGRID focuses its efforts on affordable, clean energy while nurturing sustainable communities through investments in research, development and innovation. This is aligned with the company's continued stewardship for action on climate. AVANGRID is fully committed to contributing to the social and economic development of communities in which it operates and the protection of the environment through its sustainable energy business model.

AVANGRID has adopted a management approach to sustainability that engages all levels of the company from the board of directors to our employees and embeds a commitment to sustainable development and sustainability in all aspects of our business.

## **Our Purpose and Values**

As a leading sustainable energy company, AVANGRID stands at the forefront the transformation to a competitive, clean energy future. Our purpose is to work together to deliver a more accessible clean energy model that promotes healthier, more sustainable communities every day. This purpose is inspired by and built on our three specific core values: Sustainable, Agile and Collaborative. We strive to embody our purpose and values in everything we do.

## **Board of Directors**

The board of directors sets the company's sustainable development strategy and oversees sustainability issues and AVANGRID's commitment to contribute to the achievement of the Sustainable Development Goals (SDGs) approved by the member states of the United States.

## **Chief Executive Officer**

Responsible for overseeing execution of the company's overall sustainable development strategy and the long-term performance.

## **Senior Vice President – Chief of Staff | CEO's Office**

Responsible for coordinating the company's sustainable development strategy across business areas and overseeing investments and initiatives in our communities. The CEO's Office, under the direction of the Senior Vice President – Chief of Staff, is responsible for facilitating partnerships among business areas to develop sustainability goals, integrating sustainable business practices across the company, and sustainability reporting.

## **Management Team**

Accountable for implementing specific elements of company's sustainable development strategy and integrating sustainability and the Sustainable Development Goals (SDGs) approved by the member states of the United Nations into their respective areas.

## **Employees**

Implement departmental initiatives and identify local sustainability opportunities.

# QUALITATIVE DATA

## Electricity Generated

	2016	2017	2018
Total Net Generation for the data year ( <i>net megawatt hours</i> )	17,912,000	18,104,000	20,057,000
Coal	--	--	--
Natural Gas	2,583,000	2,366,000	2,722,000
Nuclear	--	--	--
Petroleum	--	--	--
Total Renewable Energy Resources	15,329,000	15,738,000	17,335,000
Biomass/Biogas	--	--	--
Geothermal	--	--	--
Hydroelectric	327,000	385,000	268,000
Solar	199,000	164,000	262,000
Wind	14,803,000	15,103,000	16,724,000
Other renewables	--	86,000	81,000

All data based on AVANGRID's ownership of generating assets as of December 31, 2018. 2015 was selected as the baseline for this and other tables to align with AVANGRID's commitments to increase installed renewables capacity of more than 30% by the year 2020 compared to a year 2015 baseline and reduce the intensity of greenhouse gas emissions of our generation capacity by 25% by the year 2020 compared to a year 2015 baseline and be carbon neutral by the year 2035. Please see AVANGRID's Sustainability Report for 2018 available at [www.avangrid.com](http://www.avangrid.com) for additional information about these commitments.

## Generation Capacity

	2016	2017	2018
Total Owned Nameplate Generation Capacity at end of year ( <i>megawatt</i> )	6,879	7,472	7,561
Coal	--	--	--
Natural Gas	845	848	848
Nuclear	--	--	--
Petroleum	--	--	--
Total Renewable Energy Resources	6,034	6,624	6,713
Biomass/Biogas	--	--	--
Geothermal	--	--	--
Hydroelectric	118	118	118
Solar	50	106	116
Wind	5,853	6,387	6,466
Other renewables	13	13	13

All data based on AVANGRID's ownership of generating assets as of December 31, 2018. AVANGRID's renewables division is among the top three wind operators in the United States and is at the forefront of transforming the way the country produces and uses energy. Avangrid Renewables has approximately 6.6 GW of wind and solar generation across the country, as well as 636 MW of natural gas-fired generation.

## Investing in the Future: Capital Expenditures, Energy Efficiencies (EE) and Smart Meters

	2016	2017	2018
Total Annual Capital Expenditures ( <i>nominal dollars</i> )	1,923,000,000	2,262,000,000	1,726,000,000
Incremental Annual Electricity Savings from EE Measures ( <i>megawatt hours</i> )	175,680	167,723	167,282
Cumulative Investment in Electric Energy Efficiency Programs ( <i>nominal dollars</i> )	57,040,787	56,880,876	39,601,802
Percent of Total Electric Customers with Smart Meters ( <i>at end of year</i> )	44%	44%	44%

In 2018, we were selected to provide reliable clean energy to New England customers through two major projects, Vineyard Wind and New England Clean Energy Connect (NECEC). Our Vineyard Wind offshore project, a joint venture, was chosen by the Commonwealth of Massachusetts to provide 800 MW of renewable generating capacity to Massachusetts utilities. Vineyard Wind will be the country's first large-scale offshore wind farm, establishing AVANGRID as the leader of the U.S. offshore wind industry. Additionally, our \$950 million NECEC project won a Massachusetts solicitation to deliver 1,200 MW of hydropower from Quebec to the New England power grid, making it the region's largest new source of carbon-free electricity. Both projects are on track to secure all permits in 2019 and allow our customers to avoid the emission of 4.7 million tons of carbon dioxide annually by 2022, when both projects are complete. Avangrid Renewables added 1 GW of long-term wind and solar power contracts in 2018, including 400 MW of offshore wind.

## Number of Customers

	2016	2017	2018
Total number of customers	3,210,847	3,229,812	3,248,957
Electricity customers	2,218,480	2,231,576	2,243,570
Gas customers	992,367	998,236	1,005,387

## GHG Emissions: Carbon Dioxide (CO<sub>2</sub>) and Carbon Dioxide Equivalent (CO<sub>2</sub>e)

	2016	2017	2018
Carbon Dioxide (CO <sub>2</sub> )			
Total owned generation CO <sub>2</sub> emissions ( <i>metric tons</i> )	1,040,335	965,570	1,092,022
Total owned generation CO <sub>2</sub> emissions intensity ( <i>metric tons/net megawatt hours</i> )	0.058	0.053	0.054

To nearest thousand metric tons. AVANGRID is committed to providing clean, low emission energy. 89% of our generation capacity in 2018 was emission free and we seek to minimize emissions where possible. AVANGRID has pledged to be carbon neutral by 2035 with a focus on increasing our renewables installed generation capacity by more than 30% by the year 2020, compared to a 2015 baseline. Our objective is to reduce emissions intensity by 25% by 2020. Please see AVANGRID's Sustainability Report for 2018 available at [www.avangrid.com](http://www.avangrid.com) for additional information about AVANGRID's pledge to be carbon neutral and emissions intensity.

The environmental and green attributes attributable to the electric generation from the Avangrid Renewables' facilities have been or likely will be sold or transferred to third parties, who are solely entitled to the reporting and other rights to all renewable energy credits, emissions reductions, offsets, allowances and the avoided emissions of greenhouse gas pollutants, collectively environmental attributes. Avangrid Renewables is not claiming ownership of any environmental attributes from its renewable generation fleet for any purpose, including compliance with any federal or state law or reporting to any federal or state agency, or any other present or future federal, state, local, international, foreign, or voluntary renewable energy, emission reduction, or emissions trading program.

## Non-Generation CO<sub>2</sub>e Emissions

	2016	2017	2018
Fugitive CO <sub>2</sub> e emissions of sulfur hexafluoride ( <i>metric tons</i> )	6,736	7,432	9,366
Fugitive CO <sub>2</sub> e emissions from natural gas distribution ( <i>metric tons</i> )	236,168	232,371	222,481

To nearest thousand metric tons. CO<sub>2</sub>e emissions from natural gas distribution owned by Avangrid utilities that are required to report to EPA under 40 CFR 98, Subpart W.

## Nitrogen Oxide (NO<sub>x</sub>)

	2016	2017	2018
Total NO <sub>x</sub> emissions ( <i>metric tons</i> )	152	129	144
Total NO <sub>x</sub> emissions intensity ( <i>metric tons/net megawatt hours</i> )	0.000008	0.000007	0.000007

To nearest thousand metric tons.

## Sulfur Dioxide (SO<sub>2</sub>)

	2016	2017	2018
Total SO <sub>2</sub> emissions ( <i>metric tons</i> )	6	5	5
Total SO <sub>2</sub> emissions intensity ( <i>metric tons/net megawatt hours</i> )	0.0000003	0.0000003	0.0000003

To nearest thousand metric tons.

## Mercury (Hg)

	2016	2017	2018
Total Hg emissions ( <i>kilograms</i> )	0	0	0
Total Hg emissions intensity ( <i>kilograms / net megawatt hours</i> )	0	0	0

## Human Resources

	2016	2017	2018
Total number of employees	6,801	6,570	6,449
Total number on board of directors	14	14	14
Total women on board of directors	2	2	2
Total minorities on board of directors	0	0	0
Employee safety metrics			
Recording incident rate	2.83	3.42	2.92
Lost-time case rate	0.70	0.64	0.58
Days away, restricted, and transfer (DART) rate	n/a	2.08	1.89
Work-related employee fatalities	0	0	0
Work-related contractor fatalities	0	1	0

Tracking of DART rate at AVANGRID consolidate has changed since 2017, so 2016 data are not available

## Fresh Water Resources

	2016	2017	2018
Water consumption (billions of liters/net megawatt hours)	0.000000	0.000000	0.000000
Water withdrawals – non-consumptive (billions of liters/net megawatt hours)	0.000000	0.000000	0.000000

## Waste Products

	2016	2017	2018
Percent of non-hazardous municipal solid waste diverted	68%	28%	17%
Percent of coal combustion production beneficially used	0	0	0

Waste recovered, recycled or reused.  
AVANGRID does not own coal power generating facilities.

## Natural Gas Distribution Data

### Customer Count and Distribution Mains in Services

	2018
<b>Number of gas distribution customers</b>	1,005,387
<b>Distribution mains in service (<i>miles</i>)</b>	15,272
Plastic ( <i>miles</i> )	7,273
Cathodically protected steel – bare & coated ( <i>miles</i> )	6,726
Unprotected steel – bare & coated ( <i>miles</i> )	312
Cast iron / wrought iron – without update ( <i>miles</i> )	965
<b>Plan / commitment to replace / upgrade remaining miles of distribution mains (<i># years to complete</i>)</b>	
Unprotected steel – bare & coated ( <i># years to complete</i> )	20
Cast iron / wrought iron – without update ( <i># years to complete</i> )	20

These metrics include all local distribution companies (LDCs) held by AVANGRID that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule.

### Distribution CO<sub>2</sub>e Fugitive Emissions

	2018
CO <sub>2</sub> e fugitive methane emissions from gas distribution operations <sup>1</sup> ( <i>metric tons</i> )	221,334
Fugitive methane emissions from gas distribution operations <sup>2</sup> ( <i>metric tons</i> )	8,853
Natural gas throughput from gas distribution operations <sup>3</sup> ( <i>thousands of scf</i> )	247,216,424
CO <sub>2</sub> e fugitive methane emissions rate ( <i>metric tons per thousand scf of Throughput</i> )	0.0009
Fugitive methane emissions rate ( <i>metric tons methane per methane content of the above mscf of Throughput</i> )	0.0020

<sup>1</sup> Fugitive methane emissions (not CO<sub>2</sub> combustion emissions) stated as CO<sub>2</sub>e, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(q)(3)(ix)(C) and (D), 98.236(r)(1)(iv) and (v), and 98.236(r)(2)(v)(A) and (B). This metric should include fugitive methane emissions above the reporting threshold for all natural gas local distribution companies (LDCs) held by the AVANGRID that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule.

<sup>2</sup> Fugitive methane emissions (not CO<sub>2</sub> combustion emissions) stated as metric tons of methane, as reported to EPA under 40 CFR 98, Subpart W, sections 98.236(q)(3)(ix)(C) and (D), 98.236(r)(1)(iv) and (v), and 98.236(r)(2)(v)(A) and (B). This metric should include fugitive methane emissions above the reporting threshold for all natural gas local distribution companies (LDCs) held by AVANGRID that are above the LDC Facility reporting threshold for EPA's 40 C.F.R. 98, Subpart W reporting rule.

<sup>3</sup> This metric provides gas distribution throughput reported under Subpart W, 40 C.F.R. 98.236(aa)(9)(i) through (iii), as reported on the Subpart W e-GRRT integrated reporting form in the "Facility Overview" worksheet Excel form, gas received (column 1) plus the gas withdrawn (column 2) minus the gas injected into storage (column 3), in thousands of standard cubic feet (scf).