



# State Agency "Lead By Example" Energy Initiative

**Executive Order 15-17** 







www.energy.ri.gov











**August 2018** 

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### LETTER FROM THE COMMISSIONER

#### To the Honorable Gina M. Raimondo, Governor of the State of Rhode Island

In accordance with Executive Order 15-17, *State Agencies to Lead By Example in Energy Efficiency and Clean Energy*, I am pleased to provide you with the Office of Energy Resources' (OER's) second annual report, for the year 2017, evaluating the State's progress toward Lead By Example Executive Order (LBE EO) goals.

As demonstrated by our state's recent 3th place national ranking in energy efficiency programs and policies by the American Council for an Energy Efficient Economy (ACEEE), Rhode Island is an innovative leader in clean energy adoption. Through on-going Lead By Example initiatives, OER and partner state agencies continue to grow green jobs, create new investment opportunities, reduce energy costs, shrink the State's carbon footprint, and ensure a more reliable and sustainable energy system. Recent highlights include:

• Reducing the energy consumption across State facilities by 10.1% compared to 2014 baseline.



- Launching a Demand Response Program to reduce peak energy demand and generate revenues for the State.
- Developing the State's first voluntary building Stretch Code.
- Ensuring that 50% of electricity consumed by State facilities comes from renewable energy resources.
- Converting State-owned highway streetlights to LED technologies.
- Development and management of competitive electricity and natural gas supply contracts for all state agencies.
- Development of a utility centralized payment system for all state agencies that saves money by avoiding late fees and increasing staff efficiency.
- Procurement of a web-based utility bill management software to track and audit energy expenses.

Under your continued leadership, these on-going efforts serve as a strong foundation to grow our economy and achieve a secure, cost-effective, and sustainable energy future. Over the next year, OER is committed to furthering progress and coordination among State agencies as we continue to lead by example.

Sincerely,

A Shart

Carol J. Grant Commissioner



# **INTRODUCTION**

On December 8, 2015, Governor Gina M. Raimondo signed *Executive Order 15-17: State Agencies to Lead by Example in Energy Efficiency and Clean Energy*. The Lead by Example Executive Order (LBE EO) sets robust energy reduction targets and clean energy goals for State agencies consistent with the Governor's broader policy goals that include clean energy industry and job growth; reducing public sector energy costs; diversifying the State's energy mix; and reducing public sector greenhouse gas (GHG) emissions. The Governor tasked the Rhode Island Office of Energy Resources (OER) with overseeing and coordinating efforts across State government to achieve the following LBE EO goals:

#### **Executive Order 15-17 Goals**

Procure 100% of State government electricity consumption from renewable sources by 2025

Achieve an overall 10% reduction in energy consumption below FY2014 levels by FY2019

Post State energy usage publicly and report progress towards goals on an annual basis

*Ensure a minimum of 25% of new light-duty state fleet purchases/leases be zero-emission vehicles by 2025* 

Achieve a high standard of Green Building Operations & Maintenance at all state facilities

*Develop a voluntary Stretch Code based on the International Green Construction Code or equivalent by 2017* 

Reduce the use of natural resources at State facilities

Support the state-wide goal of decreasing overall greenhouse gas emissions by 45% below 1990 levels by 2035

Agencies shall consider other policies to reduce greenhouse gas emissions such as purchasing energy efficient appliances and products, installing electric vehicle charging stations at State properties, and reducing employees' vehicle miles traveled for work

State agencies shall consider full life-cycle cost analyses in planning and implementing projects

Pursuant to the LBE EO, OER provides this Annual Report to demonstrate compliance with and progress toward achievement of the Governor's clean energy goals for State agencies. To advance this important work, OER has developed key LBE metrics to measure success across seven comprehensive work categories, including:

- Energy Data Management
- Purchasing Mechanisms
- Energy Efficiency Projects
- Renewable Energy
- Clean Transportation
- Training and Recognition
- Energy Procurement

OER's LBE EO achievements, progress metrics and on-going efforts within the aforementioned work categories are detailed on the following pages.

### **ACHIEVEMENT SUMMARY**

In December 2015, Governor Gina Raimondo issued an Executive Order directing State agencies to 'Lead by Example' by achieving robust clean energy targets and developing clean energy practices. After two years of implementation, Rhode Island State agencies have reduced their energy consumption by 10.1% and now procure 50% of their electricity supply from clean energy sources. The Lead by Example initiative is also promoting interdepartmental cooperation, unlocking opportunities to invest in comprehensive energy efficiency and renewable measures that can reduce and stabilize public sector energy costs, shrink government's carbon footprint, and support Rhode Island's burgeoning clean energy economy.

Key accomplishments include:

- Reducing energy consumption across State facilities by 10.1% compared to a 2014 baseline.
- Supporting the installation of solar arrays on five state buildings.
- Supporting the installation of 7 new dual port electric vehicle charging stations across the State.
- Launching a Demand Response Program to reduce peak energy demand.
- Developing the State's first voluntary building Stretch Code.
- Ensuring that 50% of electricity consumed by State facilities comes from renewable energy resources.
- Converting State-owned highway streetlights to high-efficiency LEDs.
- Development and management of competitive electricity and natural gas supply contracts for State agencies.
- Development of a utility centralized payment system for all state agencies that saves money by avoiding late fees and increasing staff efficiency.
- Procurement of a web-based utility bill management software to track and audit energy expenses.

# LEAD BY EXAMPLE PROGRESS METRICS

Executive Order Category	Target	Current Status			
Overall Energy Consumption Reduction	10% reduction by end of FY 2019	<b>10.1%<sup>1</sup></b> : percent reduction in overall State facilities' energy consumption			
Electricity Consumption from Renewables	100% by 2025	<b>50%:</b> percent of State government's electricity consumption is sourced from renewables			
Zero-Emission Vehicles in State's Light-Duty Fleet	25% of new light-duty state fleet purchases or leases be zero-emission vehicles by 2025	<b>1.5% (15 vehicles)</b> : percent of light- duty vehicles (purchased or leased since Dec 2015) that are zero- emission vehicles			
Green Building Operations & Maintenance	Train facility managers in green building management	<b>10:</b> number of facility managers who have completed Building Operator Certification (BOC) training			
Stretch Code Development	Complete Stretch Code development by end of 2017	<b>Complete:</b> Commercial and Residential stretch codes were developed and are available on OER's website			
Other Green Policies	Increase electric vehicle infrastructure	<b>58</b> : total number of charging stations installed with support from OER			
Natural Resource Use Reduction	Reduce the use of water in State facilities	To Be Pursued			
Other Green Policies	Decrease energy use by appliances	To Be Pursued			
Other Green Policies	Decrease miles traveled by State employees for work	To Be Pursued			

<sup>1</sup>Energy reductions for both electricity and natural gas consumption from January 2017 to December 2017 are compared to year 2014 data. As OER develops a centralized dataset with more historical data the reduction will be compared to base year FY2014. This comparison is not normalized for weather fluctuations.

# **ENERGY EFFICIENCY PROJECTS**

Achieving deep energy savings at existing facilities and implementing above-code new construction projects will assist the State in meeting its LBE EO 10% energy consumption reduction target. OER is working closely with its State agency partners to advance this work.

Currently, OER provides administrative, technical and other support resources to public sector entities as they scope, design, procure, finance, and implement cost-effective energy efficiency projects at their facilities. To streamline the availability and leveraging of existing energy efficiency program incentives, OER worked with the Department of Administration and National Grid to negotiate a Strategic Energy Management Plan (SEMP)<sup>3</sup>. The SEMP Memorandum of Understanding (MOU) document describes specific incentive structures for energy efficiency projects completed by the State; supports building energy auditing and retro -commissioning efforts; provides a single point of contact for project coordination and technical assistance; and details other support initiatives, such as facilities management training for applicable State employees. The SEMP also establishes energy reduction goals for existing buildings, totaling 24.8 million kWh and 746,500 therms over a period of three years.

Coupled with the establishment of a comprehensive SEMP, OER has allocated approximately \$7.5 million (since 2015) in Regional Greenhouse Gas Initiative (RGGI) auction proceeds to support cost-effective energy efficiency and renewable energy projects across State government. These dollars are being leveraged with available utility-administered incentives and other funding sources, where available, to build a pool of capital that will drive clean energy investments designed to reduce State energy costs, diversify the government's energy supply portfolio, and reduce the State's carbon footprint.

<sup>3</sup>For more information on the State's SEMP, please see Appendix A.

<sup>4</sup>Other key partners in this effort include the Rhode Island Building Code Commission and Northeast Energy Efficiency Partnerships (NEEP).

All efforts described above are meant to support energy efficiency projects throughout the state and, specifically, in State-owned facilities. For a full list of projects completed and initiated since the signing of the LBE EO, please see Appendix B: Project Status Report.

# **RENEWABLE ENERGY**

Consistent with the Governor's Lead by Example and 1,000 MW by 2020 clean energy goals, OER is spearheading efforts to increase the adoption of renewable energy resources across State facilities. Investments in both small and large-scale renewables, such as rooftop and ground-mounted solar, offer the potential to reduce long-term energy costs and exposure to price volatility, support local clean energy jobs, and "green-up" state agencies/facilities. Starting in 2016, OER began providing administrative, technical, and other support resources to help

To date, five solar installations are operational: three on the Capitol Hill complex, one at the new Veterans home in Bristol and one at the new Attorney General building in Cranston. Additional installations, including PV carports and a large-scale ground-mounted solar array, are being considered for other state-owned locations.

In addition, the State will be purchasing more than half of its energy supply needs from renewable resources thanks to the state's Renewable Energy Standard (RES) and use of competitive procurement strategies to exceed mandated renewable energy procurement amounts.

In 2018, OER posted an RFP for a 5 MW renewable system to be located at the Ladd Center in Exeter. This project offers the potential to meet 6% of State government's energy demand. OER will continue to work with its sister agencies to expand the amount of electricity generated by renewables for the State and promote the expansion of clean energy jobs and investments across Rhode Island.



# **CLEAN TRANSPORTATION**

OER anticipates that public sector electric vehicle (EV) charging station infrastructure will become an important priority in the coming years. Specifically, OER is looking to install vehicle charging infrastructure at public locations through its Charge Up! program, which has been made available to State agencies and municipalities. Charge Up! applicants may qualify for up to \$60,000 in incentives to support the purchase and installation of electric vehicle charging stations (Level II or higher) at publicly-accessible locations. In addition, applicants that install at least one charging station through this program may also qualify for up to \$15,000 to support the purchase or lease of a new electric vehicle as part of their public sector fleet. For more information on the Charge Up! program, please visit: <u>www.energy.ri.gov/</u>Transportation/ChargeUp/index.php.

In addition to charging infrastructure, OER hopes to increase the number of Zero Emission Vehicles (ZEVs) within the state fleet. Under Lead by Example, 25% of the state's light duty fleet must be zero-emission by 2025. As of Q4 2017, the state is operating 15 ZEVs in it's fleet, comprising 1.5% of all light-duty fleet vehicles. OER hopes to increase this number in 2018 through the Charge Up! program, as well though better outreach and education of the benefits of ZEVs.

### **BUILDING OPERATIONS**

Encouraging and promoting green building management, operation, and maintenance practices is vital to achieving and perpetuating energy savings. As part of the States' SEMP agreement with National Grid, the utility is providing scholarships for State facility managers to attend Building Operator Certification (BOC) trainings. This training and certification program was created by the Northwest Energy Efficiency Council (NEEC) for building engineers and maintenance personnel. Program graduates are able to make their buildings more comfortable, energy efficient and environmentally friendly by applying system maintenance and optimization skills learned throughout the course. Since the signing of the LBE EO, ten (10) state employees have followed the training and additional five are scheduled to

participate this year.

The BOC training is nationally recognized and includes seventy-four (74) hours of management and maintenance training.



# **ENERGY PROCUREMENT**

In an effort to reduce public sector energy costs, OER – in partnership with the Department of Administration – is supporting competitive energy supply procurement processes for State agencies. These procurements have also been made available to other public sector entities, such as quasi-state agencies and municipalities. By aggregating demand and leveraging economies of scale through a competitive process, OER and DOA aim to reduce energy supply costs and reduce energy price volatility for all participating public facilities.

In May 2017, OER, working in collaboration with other divisions in the Department of Administration, conducted a competitive electric supply auction for all Executive agencies, Judiciary, RIC/CCRI, and the quasi-state Resource Recovery Corporation. Four electricity suppliers qualified to enter the auction and competed against each other to give the State the best price for electricity. As a result, the State selected a fixed cost contract at \$0.07738 per kWh for a three-year term, while ensuring that 50% of electricity supply contract will provide the State with price and budget stability, thereby reducing its exposure to costly energy price volatility. Similar efforts have been conducted for the State's natural gas supply, and OER continues to explore options for further aggregating demand and to leverage public sector economies of scale for future energy supply procurements.

### **STRETCH CODE**

As directed in Governor Gina Raimondo's Lead by Example Executive Order (EO 15-17), in February 2018, OER and partner stakeholders made the State's first voluntary stretch code available to private and public building construction and renewable projects.

A stretch code is a building code or compliance pathway that is more aggressive than base code. Also known as "reach codes," their main purpose is to help buildings achieve higher energy savings and implement advanced building practices. Rhode Island's first voluntary Stretch Codes have been made available to private and public building construction and renovation projects. The codes were developed with the assistance of subject matter experts and were vetted through a public comment process.

Rhode Island's Stretch Codes are meant to be used on a voluntary basis to guide the construction and/or renovation of buildings that use less energy, have less negative impact on the environment, and achieve higher levels of occupant health and comfort. New building construction and large-scale renovation projects are also encouraged to use the Stretch Codes to help maximize the financial incentives available from National Grid's Energy Efficiency Programs.

# **RECOGNITION**—Annual Lead By Example Awards

In April 2018, Rhode Island Office of Energy Resources (OER) recognized 12 state government agencies, quasi-public agencies, municipalities, and state colleges and universities for their renewable energy and energy efficiency achievements at its Second Annual Lead By Example Energy Awards ceremony, held at the Rhode Island State House.

Governor Raimondo's Executive Order 15-17 directs state agencies to "Lead by Example" and transition energy supply and consumption practices to lower-cost, cleaner, low-carbon solutions. Among the Lead by Example directives, the Governor has tasked OER with overseeing and coordinating activities across government.

"Congratulations to all of this year's Lead by Example Energy Award nominees," said Governor Gina M. Raimondo. "I'm proud of the work we've done together to move Rhode Island toward a more secure, cost-effective and sustainable energy future."

The State's Lead by Example efforts promote the adoption of clean energy measures across public sector facilities and state agencies. State and municipal employees are helping to reduce energy costs and mitigate greenhouse gas emissions, consistent with Rhode Island's economic, energy and environmental policy goals. This work frequently goes unheralded, but is a critical tool in addressing constrained budgets and carbon footprints across government.

"In our second year hosting the Lead by Example Energy Awards, we continue to be surprised and delighted by the nominees' creativity and drive, using the latest in energy efficiency and clean energy technology to reduce their costs and lower their emissions," said State Energy Commissioner Carol Grant. "We hold all of our nominees up as shining examples for others in the public and private sector to follow."

#### Lead By Example Energy Award-Winners:

•**Providence Water**: The agency installed a rooftop solar array on its central operations facility, which is expected to offset about 60 percent of its annual electric consumption. It installed energy efficient LED lighting and lighting controls throughout its facility. Providence Water also purchased three zero-emission Chevy Bolt EVs and installed two electric vehicle charging stations on its property.

•**Rhode Island Office of Veterans Affairs**: The new Rhode Island Veterans Home, opened in 2017, used multiple energy efficiency strategies, including heating and cooling systems that are 20 percent more efficiency than code requirements and high-efficiency lighting and controls. The building features a rooftop solar array.

•Town of Coventry and Coventry Schools: Coventry upgraded eight municipal buildings to become more energy efficient including the town hall, annex, garages, library, police department and senior center. The town also upgraded the Coventry High School, middle school and five elementary schools with efficient lighting, kitchen equipment, plumbing and insulation.

•The University of Rhode Island: URI invested in energy efficiency improvements including exterior and interior LED lighting, insulation and HVAC systems. URI, South Kingstown and Narragansett have formed a partnership to share power from a new 9.3-megawatt ground-mounted solar array, which occupies a capped landfill.

The nominees that received honors included:

- •City of Central Falls
- City of Providence
- •Town of Westerly
- Department of Administration
- •Office of the Attorney General
- •Narragansett Bay Commission
- Quonset Development Corporation
- Rhode Island College



# **DEMAND RESPONSE PROGRAM**

In 2017, OER launched a Demand Response Program for State facilities. The program enables state agencies to commit to ISO New England, the regional grid operator, that in times of extreme conditions and high demand on the grid, they will be able to curtail their electric demand and, as a result, be paid an agreed upon amount for making such commitments. In 2017, Department of Administration, Rhode Island College, and the University of Rhode Island sites were enrolled in the program.

# **ENERGY DATA MANAGEMENT**

In order to streamline access to, and improve the accuracy of, state energy usage data and expenditures, OER initiated a process to centralize all State agency utility bills across the electric, natural gas, and delivered fuels sectors. In 2015, OER began receiving, auditing and charging the appropriate accounts for all State agency electricity bills. Natural gas bills were centralized in a similar manner by August 2016. OER anticipates delivered fuels (propane and oil) billing to be centralized by 2019.

By collating and providing greater oversight over State agency utility bills, OER has been able to improve energy usage and cost forecasting, decrease payment errors, and analyze progress toward Lead by Example goals. Importantly, OER has been simultaneously working to increase public and inter-governmental transparency into these important data sets.

In 2017, OER procured a web-based utility bill management software (Energy CAP) to track and audit energy expenses and provide State agencies with better online data access. OER anticipates having this utility management software operational by the end of 2018.

OER enhances agency-level communications and coordination by conducting outreach meetings with state agencies to identify LBE point of contact(s), connect agencies to resources/programs/incentives supported by OER, and establish agency-specific goals to support achievement of overall LBE EO directives.



# **PURCHASING MECHANISMS**

OER, in partnership with the Division of Purchases, has developed purchasing mechanisms (including Master Price Agreements or MPAs) to streamline the procurement and implementation of cost-effective energy efficiency and renewable energy projects.

For example, in September 2015, *MPA 508 – Energy Efficiency Services* was developed to support turnkey energy efficiency projects. Also, in July 2016, *Continuous Recruitment 44 – Solar Photovoltaic and Wind Turbine System Installation Services* was initiated to support public sector entities interested in developing renewable energy systems at their buildings and campuses. These purchasing mechanisms expedite project implementation by defining proposal requisition processes and providing access to a pool of prequalified vendors.

In addition to the aforementioned efforts, existing MPAs have been updated to support clean energy goals more broadly. Specifically, the State's delivered fuels and heating fuel MPAs were adjusted in May 2016 to: 1) ensure that all State-purchased transportation diesel contains at least 5% biofuel; 2) ensure that all State-purchased #2 heating oil contains 5% biofuel and 95% ultra-low sulfur heating oil; 3) establish options for State agencies and municipalities to purchase 20% biodiesel, 99% biodiesel, and/or 20% biofuel heating oil (B20 BioHeat); and 4) ensure that all State-purchased off-road diesel is ultra-low sulfur (S15).

#### For more information on the MPAs described above, please visit: www.purchasing.ri.gov/



# **Appendix A:** State of Rhode Island Strategic Energy Management Plan



To support achievement of the Governor's LBE EO clean energy goals, OER worked with the Department of Administration and National Grid to develop and implement a Strategic Energy Management Plan (SEMP). The SEMP provides a critical framework in which short- and long-term strategies focused on the identification and execution of cost-saving energy investment initiatives across State facilities can be successfully executed. It will assist the State with integrating clean energy investments within existing capital asset management and maintenance paradigms, whenever possible; provide access to critically-needed comprehensive project management and technical assistance resources; enhance monitoring/ measurement and verification to demonstrate performance; and align available funding streams to fully leverage public sector investments with utility-administered incentives. The potential benefits of a successful SEMP are numerous:

- Establishment of a collaborative partnership and development of a comprehensive workplan/timeline linked to energy reduction and sustainability goals, and integrated with existing planning processes;
- Access to comprehensive project management and technical assistance based on an integrated, whole building analysis and integration of new technologies that enables the full development of the asset value of State facilities;
- Achievement of deeper and broader energy savings that are otherwise inaccessible through a more piecemeal approach;
- Higher utility bill savings, lower maintenance costs, and improved human comfort at State facilities resulting from deeper investment in energy efficiency projects;
- Assistance with enhanced monitoring/measurement and verification processes to demonstrate performance and provide a "report card" for annually benchmarked results, including a long-term plan for control upgrades for the State agencies' portfolio of facilities;
- Access to enhanced incentives with added benefits as follows:
  - Screening of measures based on integrated whole building instead of single measure screening, to ensure most energy efficiency measures pass cost screening tools;
  - Incentive structure has no annual cap per account and allows projects to invest in deeper energy efficiency; and
  - On-Bill Repayment (OBR) strategy that provides a financing mechanism including a zero interest loan fund option through National Grid.
- Streamlined and efficient transactional process that includes the following:
  - Priority and fast turnaround time for application process and project implementation;
  - Modified screening process that ensures an upfront determination of incentive amounts for each project;
  - Determination of a fixed cost/savings for Technical Assistance (TA) Studies; and
  - Single point-of-contact with the utility to help manage the State's workplan.
- Access to State staff educational/training opportunities, and other non-energy support provided by the utility.

# **Appendix B:** Transportation Data



# **Electric Vehicles Charging Stations**

	Station Name	Address 1	City
1	ATLANTIC BEACH	300-398 Atlantic Ave	Westerly
2	BILTMORE HOTEL/PARKADE PARKING	51 Washington St	Providence
3	BLACKSTONE	Blackstone River Bikeway	Lincoln
4	BRADLEYHOSPITAL	1011 Veterans Memorial Pkwy	East Providence
5	BRYANT U	1150 Douglas Turnpike	Smithfield
6	BRYANT U #2	201 John Mowry Rd	Smithfield
7	BURLINGAME PARK	1 Burlingame State Park Rd	Charlestown
8	CHILIS	50 Highland Ave	East Providence
9	CHILIS LINCOLN	622 George Washington Hwy	Lincoln
10	CHILIS WARWICK	1276 Bald Hill Rd	Warwick
11	CILANTRO GRILL	430 Newport Ave	East Providence
12	CILANTROWARWICK	1759 Post Rd	Warwick
13	COLT STATE PARK	1 Colt Dr	Bristol
14	DANS PLACE	880 Victory Hwy	West Greenwich
15	DOA#1	1 Capitol HI	Providence
16	DOA#2	1 Capitol HI	Providence
17	FISHERMENS PARK	1011 Point Judith Rd	Narragansett
18	FORT ADAMS	82-94 Fort Adams Dr	Newport
19	FOUNDRYBUILDING	285 Edith St	Providence
20	GARDEN CITY#1	76-98 Midway Rd	Cranston
21	GARDEN CITY#2	76-98 Midway Rd	Cranston
22	KOHLS KINGSTOWN	The Shoppes at Quonset	North Kingstown
23	KOHLS WARWICK	403-425 RI-113	Warwick
24	KOHLSSMITHFIELD	371 Putnam Pike	Smithfield
25	MATUNUCK BEACH	950 Succotash Rd	South Kingstown
26	MIRIAM HOSPITAL	175-191 Summit Ave	Providence
27	NEWPORTHOSPITAL	11 Friendship St	Newport
28	PAOLINO-NEWPORT	21 Brown and Howard Wharf	Newport
29	PULASKI PARK	151 Pulaski Rd	Chepachet
30	RI COLLEGE	600 6th Street	Providence
31	RI HOSPITAL	593 Eddy St	Providence
32	RIHQ	270-310 Melrose St	Providence
33	RICHMOND GARAGE	222 Richmond St	Providence
34	ROGER WILLIAMS	1 Ferry Rd	Bristol
35	ROGER WILLIAMS2	154 Anthony Rd	Portsmouth
36	SALTY BRINE	250 Sand Hill Cove Rd	Narragansett
37	STAPLES	180 County Rd	Barrington
38	TF GREEN #1	T.F. Green Airport Connector Rd	Warwick
39	TF GREEN LOT D	T.F. Green Airport	Warwick
40	TRATTORIADELMAR (Formerly D'Vine)	145 Spruce St	Providence

Ρı Providence Providence Warwick Coventr Providence Норе **Bristol** 

41	TRUTH BOX	460 Harris Ave
42	UNION STATION	5 Memorial Blvd
43	URI#1	3 E Alumni Ave
44	UTILIDATA	225 Chapman St
45	VIKING HOTEL	1 Bellevue Ave
<b>46</b>	WARWICK MALL	315 Greenwich Ave
47	WILLARD GARAGE	104-160 Blackstone St
48	WRIGHTS FIELD	84 Inman Rd
49	RI OER / FRANCIS ST1	140 Francis St
50	RI OER / FRANCIS ST2	140 Francis St
51	RI OER / STATION#1	3 State St
52	RI OER / STATION#2	3 State St
53	RI OER / STATION#3	Boone St
54	RI PUC	89 Jefferson Blvd
55	Coventry Library & Admin Building	1670 Flat River Road
56	Providence Water Authority #1	125 Dupont Drive
57	Providence Water Authority #2	61 North Road
58	RI Bridge & Turnpike Authority - Ferry Rd.	33 Ferry Road



# **Appendix C:** Energy Consumption Data



#### Rhode Island Office of Energy Resources Energy Consumption by Year for State Agencies (Actual Billed) (Electricity and Natural gas)

Monthly MMBTU Billed			Cumulative MMBTU Billed					
	CY2014	CY2015	CY2016	CY2017	CY2014	CY2015	CY2016	CY2017
January	194,493	173,848	150,807	150,396	194,493	173,848	150,807	150,396
Executive Branch	59,396	56,965	48,143	53,930	59,396	56,965	48,143	53,930
Judiciary	7,174	7,359	4,900	6,915	7,174	7,359	4,900	6,913
RIC/CCRI Pastore	10,896	10,513	8,760	9,190	10,896	10,513	8,760	9,190
February	183,677	173,813	149,678	152,718	378,170	347,661	300,485	303.114
Executive Branch	57,333	59,897	49,838	52,348	116,728	116,862	97,981	106,279
Judiciary	7,923	9,100	7,840	6,038	15,096	16,438	12,740	12,953
RIC/CCRI	9,868	10,699	9,663	8,839	20,764	21,212	18,422	18,030
Pastore	108,553	94,117	82,338	85,492	225,581	193,128	171,342	165,852
Executive Prench	1/6,54/	1/0,436	136,750	139,142	172.036	173 214	457,235	442,256
Judiciary	7,051	7.678	6.008	5,950	22.147	24.137	18,749	18,904
RIC/CCRI	10,323	10,265	9,538	9,001	31,087	31,477	27,960	27,031
Pastore	103,865	96,141	78,078	75,374	329,446	289,269	249,420	241,226
April	134,924	122,401	119,122	174,327	689,641	640,498	556,357	616,583
Executive Branch	36,739	36,006	35,481	65,318	208,775	209,220	176,588	220,413
Judiciary	5,136	5,264	4,815	7,382	27,283	29,401	23,563	26,286
RIC/CCRI Bartore	9,216	8,729	9,317	17,752	40,304	40,206	37,277	44,783
May	115,936	107,961	98,825	98,862	805,577	748,459	655,183	715,445
Executive Branch	23,937	20,638	26,735	29,868	232,713	229,858	203,323	250,281
Judiciary	4,038	3,842	4,131	3,742	31,321	33,242	27,695	30,028
RIC/CCRI	8,679	8,708	8,421	7,993	48,983	48,914	45,698	52,776
Pastore	79,281	74,774	59,538	57,259	492,560	436,445	378,467	382,360
June Executive Pread	110,362	106,517	107,255	90,673	915,939	354,977	762,436	306,118
Executive branch Judiciary	3,076	3 479	3 738	3 414	34 398	36 722	31 433	33,442
RIC/CCRI	8,561	8,951	9,330	8,841	57,544	57,865	55,028	61,617
Pastore	79,883	73,585	68,555	52,150	572,443	510,029	447,022	434,510
July	109,788	115,343	119,287	109,282	1,025,727	970,319	881,722	915,400
Executive Branch	20,451	22,071	25,411	28,516	272,006	272,432	254,364	305,065
Judiciary Bic/ccBi	4,024	3,239	3,203	3,400	58,421	39,981	54,636	36,841
Pastore	74,554	80,652	80,910	66,791	646,997	590,681	527,932	501 301
August	107,924	123,492	117,358	113,052	1,133,651	1,093,812	999,080	1,028,452
Executive Branch	23,080	23,129	21,738	22,518	295,086	295,561	276,102	327,583
Judiciary	3,638	3,337	3,508	3,568	42,060	43,318	38,144	40,409
RIC/CCRI	8,645	9,850	10,378	9,644	76,948	77,075	75,168	81,836
Pastore	72,560	87,177	81,734	77,323	719,557	677,858	609,666	578,624
Executive Branch	22,750	24.012	20,000	24,574	217 927	219 574	206 072	252 157
Judiciary	3,998	3,645	3,691	3,611	46,058	46,963	41.834	44.020
RIC/CCRI	10,356	10,845	10,831	9,981	87,304	87,921	85,999	91,817
Pastore	73,561	76,479	68,377	76,713	793,118	754,336	678,043	655,336
October	112,016	100,775	92,090	96,679	1,356,333	1,309,569	1,194,839	1,240,009
Executive Branch	22,258	23,078	25,225	23,834	340,094	342,652	322,098	375,991
Judiciary	3,956	4,109	4,040	3,589	50,013	51,072	43,875	47,609
Pastore	75,878	64 941	54,065	10,004	37,223	819 277	732 108	714 588
November	123,897	111,451	107,451	98,071	1,480,229	1,421,020	1,302,291	1,338,080
Executive Branch	33,347	32,590	32,134	27,622	373,441	375,242	354,232	403,613
Judiciary	3,976	3,451	4,788	3,805	53,989	54,523	50,663	51,415
RIC/CCRI	8,261	8,176	8,333	8,688	105,490	104,744	103,091	110,510
Pastore	78,313	67,234	62,197	57,956	947,309	886,512	794,305	772,544
December Executive Street	152,889	124,139	123,577	130,774	1,633,119	1,545,159	1,925,868	1,468,854
Judiciary	46,731	4 944	7.050	5 274	39 382	59.467	57 713	56 688
RIC/CCRI	9,288	8,827	9,040	9,212	114,778	113,570	112,131	119,722
Pastore	89,257	72,373	62,197	70,668	1,036,566	958,884	856,502	843,212
Grant Total	1,633,119	1,545,159	1,425,868	1,468,854				

Cumulative change is compared to the base calendar year 2014

RIC/CCRI energy consumption includes only electricity.

MMBTU = 1,000,000 BTU = 10 Therms

Conversion base : 1 kWh = 0.003409 MMBtu

Executive Branch Includes: Department Of Behavioral Healthcare, Developmental Disabilities And Haspitals, Department Of Administration, Department Of Human Services, Military Staff, Department Of Connections, Elementary And Secondary Education, Department Of Labor And Training, Department Of Environmental Management, Department Of Transportation, Department Of Public Safety, Rhode Island Emergency Management Agency, Department Of Attorney General, Public Utilities Commission, Rhode Island Atomic Energy Commission, Department Of Children, Youth, And Families, Public Telecommunications Authority, Department Of Revenue



