
# 2017 ENERGY REPORT CARD

# THE COMMONWEALTH OF DOMINICA

*This document presents Dominica's Energy Report Card (ERC) for 2017, which was prepared using data and information submitted by the Member State as well as supplemental data extracted from online resources (see list of References). The ERC provides an overview of energy sector performance in Dominica by focusing on two priority sub-sectors: Electricity and Transportation. The ERC also includes energy efficiency, climate change, energy sector workforce, training and capacity building information, subject to the availability of data.*

*December 2018*

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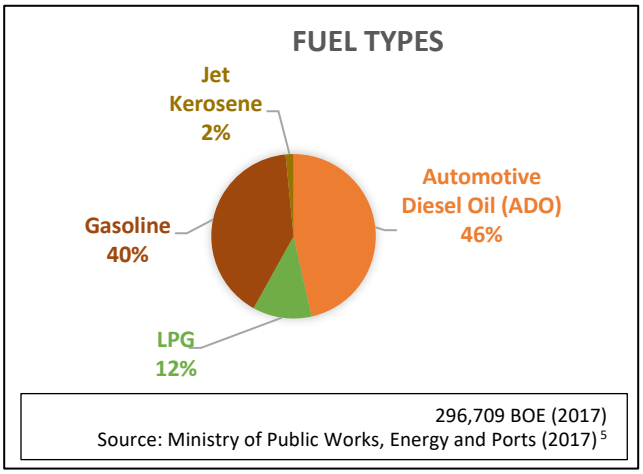
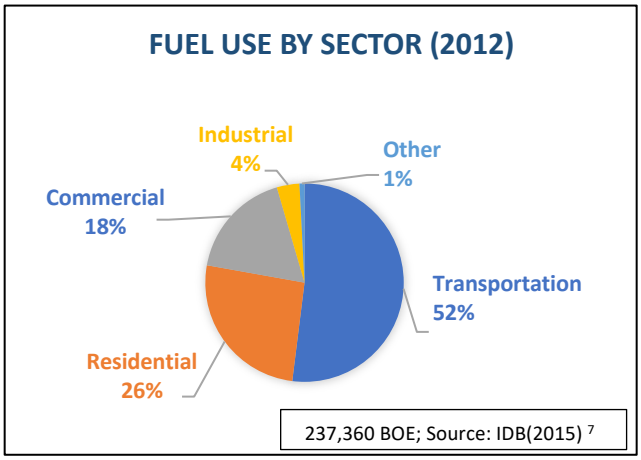
# "AT-A-GLANCE" SUMMARY OF DOMINICA'S ENERGY SECTOR

| KEY DATA & INFORMATION – ENERGY SECTOR IN DOMINICA | |
|---|---|
| Population | 73,897 (2017)[1] |
| GDP (USD) Per Capita | 11,000 (2017)[2] |
| Debt as a % of GDP | 82.7% of GDP (2017 est.)[2] |
| Human Development Index | 0.715 (2017)[3] |
| National Development Plan/ Overall Country Development Strategy | Yes[4] |
| National Energy Policy | Yes (draft)[5, 6] |
| Renewable Energy (RE) Policy | |
| RE Target | 100% by 2020[5] |
| Energy Performance Standards/Appliance Labelling | No[5] |
| Number of Persons Employed in Energy Sector | 522 (2017)[5] |
| Total Oil Import (BOE) per day | 913 (2012)[7] |
| Total Oil Export (BOE) per day | 0 (2017)[5] |
| Total Installed Capacity (MW) | 26.74 (2017)[5, 8] |
| Total Installed RE (MW) | 6.64 (2017)[5] |
| Electricity System Losses (%) | 9% (2017) [5] |
| Energy Use (kWh) Per Capita | 1,400 (2016)[5] |
| Energy Intensity | |
| Oil Imports as % of GDP | 5.02 (2015)[9] |
| Climate Change Policy | Yes[10, 11] |
| National Determined Contributions | Yes (2015)[12] |
| National Repository for Energy Data | Ministry of Public Works and Ports |




## DOMINICA'S ENERGY SECTOR PERFORMANCE AGAINST TARGETS

| *Indicator* | Base /Current Performance (Year) | National Targets | Proposed CARICOM National Target by 2027 |
|---|---|---|---|
| RE as % of Installed Capacity | 26% | 100% by 2020 | 56%[16] |
| *Energy Intensity (BTU/US$1 Unit of output) | | | |
| % Reduction in Energy Sector Emissions | | 98.6% reduction by 2030[12] | |

***Indicative RE Oil Displacement* [13,14] *Potential Annually*****

- *1 MW wind displaces 1,760 barrels of oil equivalent (BOE)*
- *1 MW hydro displaces 3,300 BOE*
- *1 MW solar displaces 1,210 BOE*

***Energy Intensity (EI)* [15]*:***

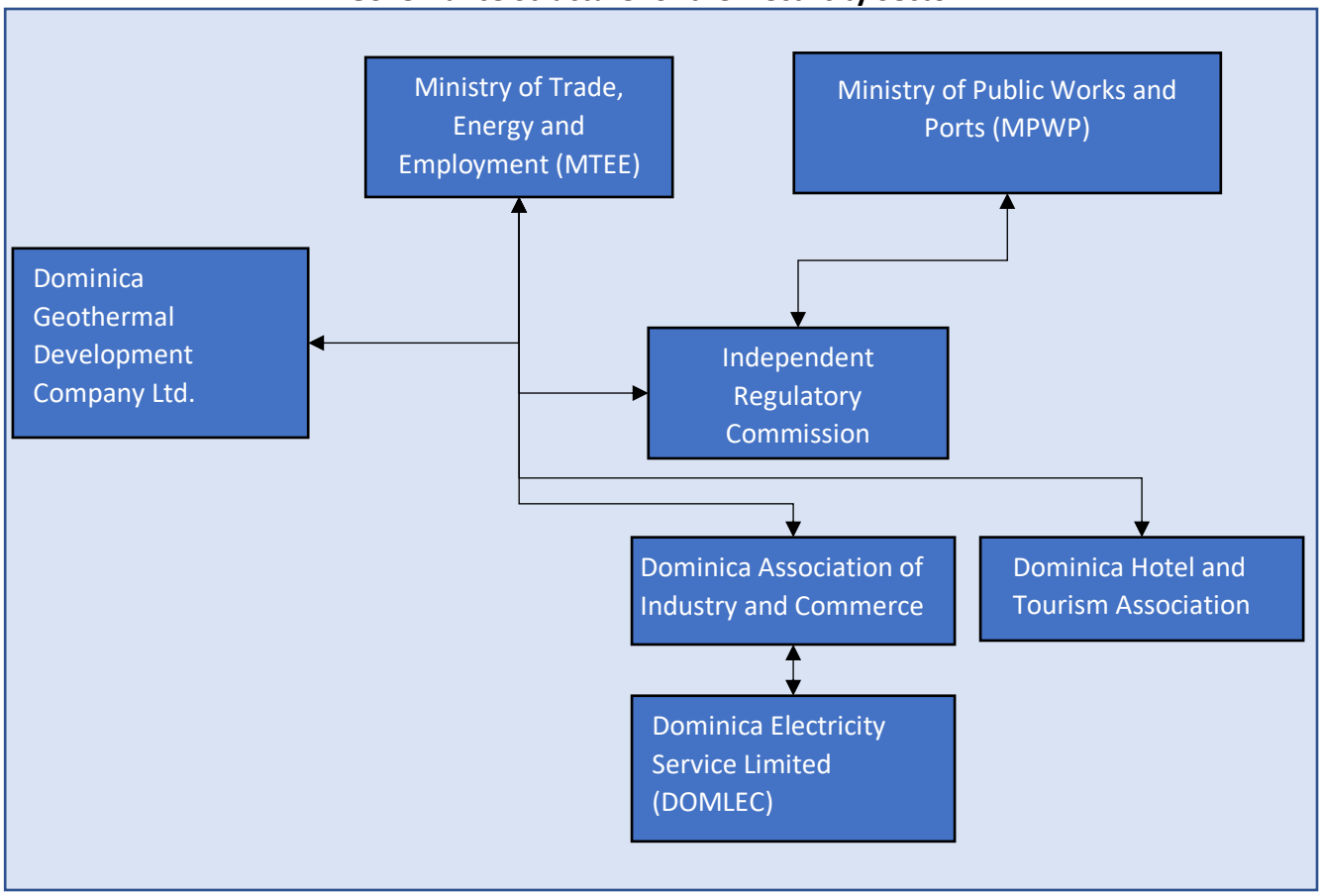
- *EI measures how energy benefits the economy and is calculated by taking the ratio of total primary energy uses (all of the fuels and flows that a country uses to get energy) to GDP (the total money made in a country). EI indicates how effectively an economy uses their fuels and flows.*

*The energy efficiency target for CARICOM is 33% reduction in energy intensity by 2027, compared to a reference of Average Annual Energy Intensity of ~13,000 BTU per USD of GDP in 2015.

**Based on capacity factors of 0.32 for wind. 0.6 for hydro and 0.22 for solar.[13]

# KEY ENERGY SECTOR STAKEHOLDERS: DOMINICA

**Governance Structure for the Electricity Sector** [5]




**Other key electricity stakeholders** include[5, 17]:

- Agencies, departments, divisions and units of the Ministry of Trade, Energy and Employment, such as the Dominica Bureau of Standards
- Agencies, departments, divisions and units of the Ministry of Public Works and Ports, such as the Energy Unit, Electrical Division
- Importers of Petroleum Products
- Dominica Association of Industry & Commerce
- Dominica Hotel and Tourism Association

**Key Stakeholders: Road Transportation Sub-sector**[5, 7, 17]

- Trade Division (Fuel Regulator)
- Ministry of Public Works and Ports
- Customs Division
- PDV Caribe Ltd, Rubis West Indies and West Indies Oil Company[18]
- National Petroleum Marketing Co Ltd
- Sol Petroleum

# POLICY, LEGAL AND REGULATORY FRAMEWORK: DOMINICA

## Electricity Sector: Policy, Legal and Regulatory (PLR) Framework [5, 16]

| | |
|---|---|
| ✓ Finalized Energy Policy and Energy Action Plan | In progress/ Draft |
| ✓ RE Targets | Completed/ In place |
| ✓ EE Targets | |
| ✓ Electricity Regulator | Completed/ In place |
| ✓ Net billing/Net metering | Completed/ In place |
| ✓ Interconnection Policy/Standards | Completed/ In place |
| × Feed-in-tariff | Not yet started/ Not established |
| × RE/EE Act | Not yet started/ Not established |

## Key Achievements: PLR Framework Timeline for the Electricity Sector [5, 12, 19]

**2002**
- National Climate Change Adaptation Policy

**2006**
- Electricity Supply Act No. 10

**2012**
- Dominica's Low Carbon Climate Resilient Development Strategy and compendium Strategic Program on Climate Resilience (SPCR)

**2014**
- Dominica's National Energy Policy (draft)
- Dominica's Sustainable Energy Plan (draft)
- Growth and Social Protection Strategy (GSPS) 2014 – 2018

**2016**
- Geothermal Resources Development Act No. 12
- Distributed RE Generation Policy

## Policies and Legislation Relevant to the Transportation Sector [6, 7, 9, 11]

| | |
|---|---|
| **Policies** | Dominica's National Energy Policy (draft)<br>Dominica's Sustainable Energy Plan (draft)<br>Dominica's Low Carbon Climate Resilient Development Strategy<br>National Roads Policy |
| **Legislation & Regulation** | Supplies Control Act No. 21 of 1979<br>Climate Change, Environment & Natural Resource Management Bill, 2014 |

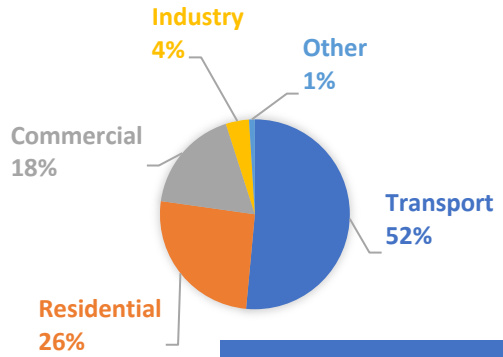
## Climate Change Framework - Dominica

| | |
|---|---|
| **Climate Change Policy** | National Climate Change Adaptation Policy, 2002[10]; Low-Carbon Climate Resilient Development Strategy 2012-2020[11] |
| **National Determined Contributions** | Yes (2015)[12] |
| **Emissions Reduction Target** | Reduction of 44.7% from 2014 levels[12] |
| **Priority Sectors for NDC** | Energy (98.6% emissions reduction against base year (2014)); transportation (16.9%), Manufacturing and construction (8.8%), Solid waste (78.6%); Commercial/institutional, residential, agriculture, forestry, fishing – 8.1%[12] |
| **National Communications (NC) to the UNFCCC** | NC1 submitted in 2001, NC2 in 2012[20] |
| **Greenhouse Gas (GHG) Inventory** | Yes [11] |

# ELECTRICITY SUBSECTOR & ENERGY EFFICIENCY: DOMINICA

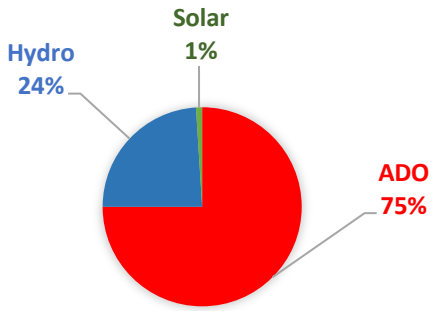
| KEY DATA & INFORMATION | |
|---|---|
| **CONVENTIONAL ENERGY** | |
| 1. Fuel Consumption – Electricity Subsector (BOE) | 55,480 (2012)[7] *(152 BOE/day)* |
| 2. Total Installed Capacity (MW) | 26.74 (2017)[5] |
| 3. Installed Conventional Capacity – Electric Utility (MW) | 20.1 (2017)[5] |
| 4. Installed Conventional Capacity – IPPs (MW) | 0 (2017)[5] |
| 5. Base Load (MW) | 9 (2017)[5] |
| 6. System Peak Demand (MW) | 8.82 MW (2017) *(48.9% of pre-Hurricane Maria peak)*[21] |
| 7. Total Generation (MWh) | 111.8 (2016)[5] |
| 8. Total Sales (MWh) | 99.38 (2016)[5] |
| 9. Total Number of Customers | 36,467)2016) [5] |
| **RENEWABLE ENERGY** | |
| 10. Total Installed RE Capacity (MW) | 6.64 (2017)[5] |
| 11. RE Capacity – Electric Utility (MW) | 6.64 (2017)[5] |
| 12. RE Capacity – IPPs (MW) | 0 |
| 13. RE as % of Total Installed Generating Capacity | 26% |
| 14. RE Target | 100% by 2020[5] |
| **TARIFFS** | |
| 15. Residential Tariff (US$/kWh) | 0.2141 – 0.2481 (2017)[5] |
| 16. Commercial (US$/kWh) | 0.2641 (2017)[5] |
| 17. Industrial/Large Power (US$/kWh) | 0.2344 (2017)[5] |
| 18. Street Lights (US$/kWh) | 0.2630 (2017)[5] |
| **EFFICIENCY** | |
| 19. Electricity System Heat Rate | |
| 20. Electricity System Losses (%) | 9 (2017)[5] |
| 21. Energy Use (kWh) Per Capita | 1400 (2016)[5] |
| 22. Energy intensity index (EII) BTU/US$1 Unit of output | |
| 23. EE Target | 20% by 2020[5] |
| **MANAGEMENT OF ENERGY DATA/KNOWLEDGE** | |
| 24. Name of Energy Knowledge Management System | N/A |
| 25. Name of Energy Data Management System | N/A |

**FUEL USE BY SECTOR**




237,360 BOE; Source: IDB(2015)[7]

**GENERATION BY FUEL TYPE**




Source: Ministry of Public Works, Energy and Ports (2017) [5]

| RE Resource | Installed Capacity (MW) | Year Commissioned |
|---|---|---|
| Wind | 0.225 (2017)[5] | |
| Solar | | |
| Hydro | 6.64 (2017)[5] | |
| Geothermal | | |
| Biomass/ WTE | | |
| **Total** | 6.865 | |

**RE as % of installed Capacity =26%**

| RE Resource Potentials | Potential Capacity (MW) | Assessment Conducted? |
|---|---|---|
| Wind | 30[9] | |
| Solar | 45[9] | |
| Hydro | 17[9] | |
| Geothermal | 300[5] | Yes |
| Biomass/ WTE | | |
| **Total** | 392 | |

# TRANSPORTATION SUBSECTOR: DOMINICA

| Key Transportation Data and Information | |
|---|---|
| **Fuel Consumption, Transportation (BOE)** | 123,370 (2012) *(338 BOE/day)*[7] |
| **Energy-related transportation targets?** | |
| **Sustainable /Alternative fuels used?** | |
| **Total Imports for Alternative Fuels** | |
| **Conventional Vehicle Stock/Vehicle Registration** | **18,047*** *(1998-2017)*[5] |
| Trucks | 3483 |
| Cars | 6667 |
| Buses | 2400 |
| SUVs | 5946 |
| **Hybrid vehicle stock** | |
| **Electric vehicle stock** | 1 |
| **Fuel Quality Standards?** | |

* In 2011, Dominica had about 23,500 registered vehicles. (IDB, 2015)[7]

| ***Breakdown of Fuel Use in the Transportation Sector*** | | |
|---|---|---|
| ***Type of Fuel/s*** | **Quantity (BOE)** | **Purpose** (Road, Railway, Aviation, Marine) |
| ***Gasoline*** | | |
| ***Diesel*** | | |
| ***Kerosene*** | | |
| | | |
| | | |

# WORKFORCE: ENERGY SECTOR, DOMINICA

**Number of Persons Employed in the Energy Sector**

| NAME OF ENTITY | PRIVATE OR PUBLIC? | NUMBER OF PERSONS EMPLOYED | BREAKDOWN BY GENDER AND EMPLOYMENT LEVEL | |
|---|---|---|---|---|
| **Ministry of Public Works, Energy and Ports** | Public | 1[5] | **Females:**<br>Managerial Level:<br>Supervisor:<br>Technical:<br>Administrative: | **Males:1**<br>Managerial Level:<br>Supervisor:<br>Technical:<br>Administrative: |
| **DOMLEC** | Private | 500[5] | **Females: 300**<br>Managerial Level:<br>Supervisor:<br>Technical:<br>Administrative: | **Males:200**<br>Managerial Level:<br>Supervisor:<br>Technical:<br>Administrative: |
| **Dominica Geothermal Development Company** | | 12 | **Females: 3** | **Males:9** |
| **Independent Regulatory Commission** | | 9 | **Females: 6** | **Males:3** |
| | | | | |

**Number of Persons Trained in the Energy Sector in 2017**

| NAME OF ENTITY | PRIVATE OR PUBLIC? | NUMBER OF PERSONS TRAINED | BREAKDOWN BY GENDER AND EMPLOYMENT LEVEL | |
|---|---|---|---|---|
| | | | **Females:**<br>Managerial Level:<br>Supervisor:<br>Technical:<br>Administrative: | **Males:**<br>Managerial Level:<br>Supervisor:<br>Technical:<br>Administrative: |
| | | | | |
| | | | | |
| | | | | |

**Indicative Number and Type of Tertiary level and vocational training SE Programmes Offered in Country**

| Name of Education Programme Provider | Name of Programme | Number of persons enrolled | Type of Programme | | | |
|---|---|---|---|---|---|---|
| | | | Certificate | B.Sc | M.Sc | Ph.D |
| | | | | | | |
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[8] Generation availability in December 2017 was 19.73MW or 72% of installed capacity. (http://www.domlec.dm/pdf/DomlecAR2017.pdf)

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