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Energy & Extractives

# **Dominica Geothermal Risk Mitigation Project:** *A Potential Game Changer*

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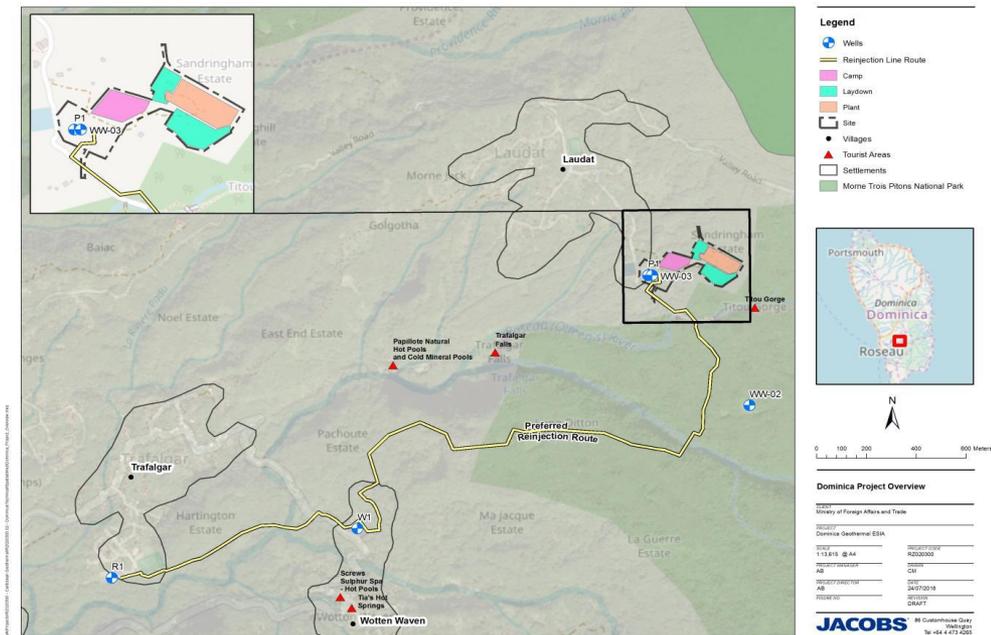
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# Dominica Geothermal Risk Mitigation Project

- ❑ **Develop small geothermal power plant (SGPP - 7 MW) with public and donor financing:**
  - ➔ Domestic tariffs stabilized - high economic return (IRR=38%)
  - ➔ Operational capability of the reservoir confirmed
  - ➔ Green field converted into far less risky brown field
- ❑ **Establish contingent finance facility** to provide insurance against potential residual resource risks:
  - ➔ Viability of overall geothermal program intact
- ❑ **Comprehensive assessment to evaluate viability of LGPP and develop roadmap to move forward:**
  - ➔ Improved knowledge about geothermal field
  - ➔ Informed decision on field expansion. Better positioned to evaluate market conditions/structure a transaction/ secure the right private partner

# Geothermal = *GAME CHANGER* for Dominica

- **Reliable, clean, lower cost base load option**
- **7 MW SGPP** for supplying the domestic market: **up to 15% electricity tariff reduction; share of renewables** in the energy mix **doubling (from 25 to 51%)**
- Larger geothermal power plant (**LGPP**) of up to **100 MW** for **exporting electricity** to Martinique and Guadeloupe: **royalties from electricity exports reaching above 10% of GDP**
- **Positive externalities regionally: prove market viability**



# Results/Lessons

## Results:

- Geothermal power way LESS expensive than diesel but only if low-cost financing and insurance are available. With all equity, DGDC should need to charge > US\$15/kWh, ***not much less than diesel cost*** (LCOE of diesel power in Dominica=19.6/kWh with oil price of US\$80/BBL)
- Geothermal tariff maintained at an artificially low level to lower the retail price of electricity (RoE at 6.2%). Minimum DSCR for the period >3.1, and average DSCR > exceed 4.2. ***DGDC will remain financially healthy through the life of the Project***
- All parties set to gain: DGDC viability protected; DOMLEC can buy cheap power; people & firm spend less on electricity

## Lessons:

- ***Need to build the fundamentals of geothermal market***
  - Capable & autonomous geothermal company
  - Geothermal law
  - Robust concession agreement for use of geothermal resource
- ***Use public money wisely***
  - Secure top-notch technical expertise for project design - *enforce highest industry standards*
  - Recruit transaction capacity to negotiate PPA
  - Recruit support throughout preparation & implementation: need wise procurement choices (EPC/O&M contracts) & supervision capacity...the devil is in the details!