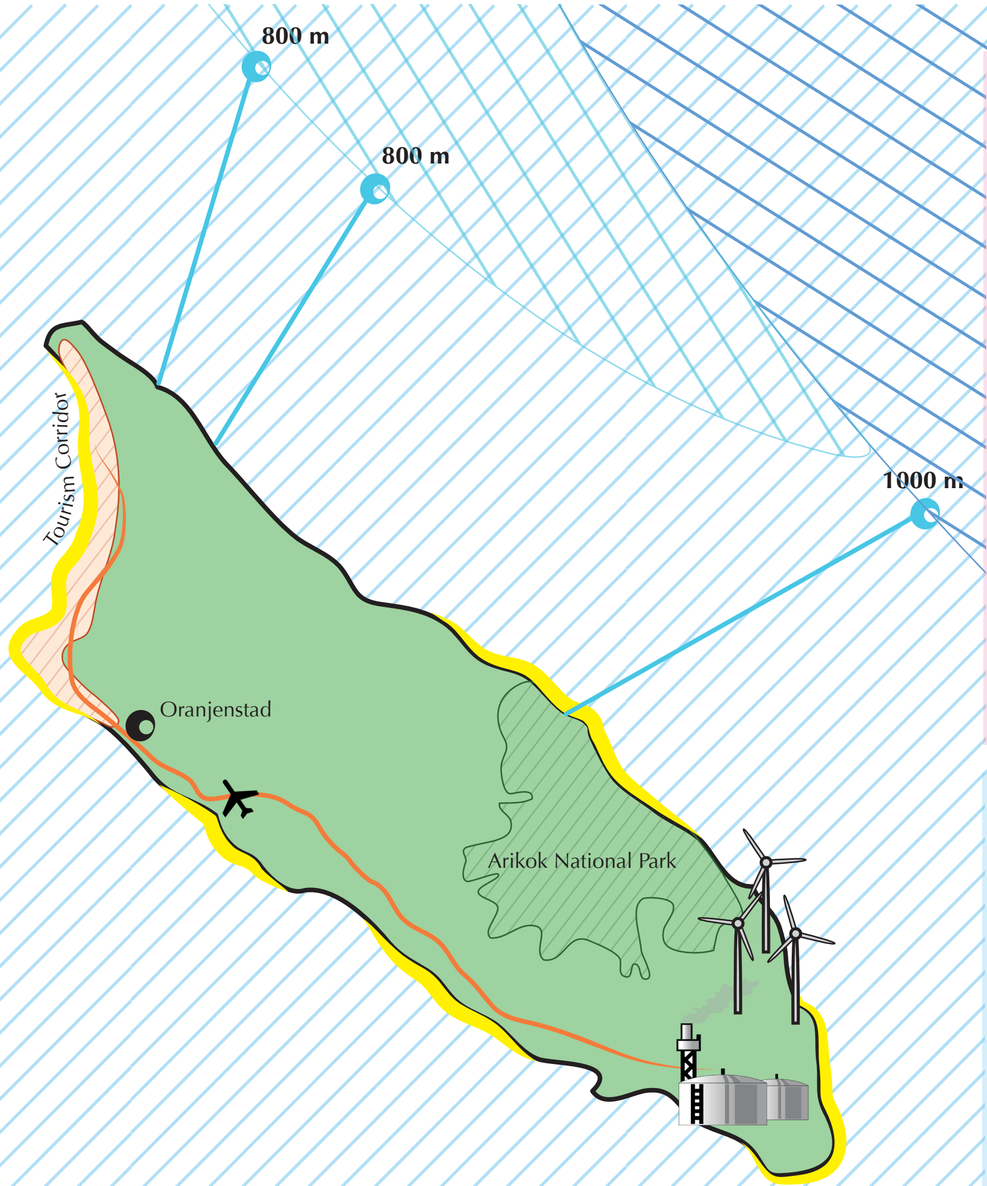
CASE STUDY ARUBA 2012

Taking the economic situation of Aruba and their stable political system into account the political and economic environment is supportive in terms of technological changes in energy production.

The Island itself shows a demand in electricity and water consumption that has great potential to be served by OTEC and SWAC technology. The geographical location without further analysis is assumed to fulfill the requirements for an OTEC/SWAC plant.

The current electricity production including the newly built plant is based on oil soley. Although this results in a high dependence, the technology itself is solid and has been used for over 6 decades. The former investment lets us assume that a near investment in energy production facilities is unlikely.

Contrary to this assumption Aruba has claimed to become a sustainable island with renewable resources. Enforcing this ambition is the increase in oil prices as well as the rising demand for energy. The former increase is due to the global shortage of oil the later is due to the increase in tourism on Aruba itself and a growing developed society.



POLITICAL:

~ Constituent Country of the Kingdom of the Netherlands.
~ Primarily Parliamentary.
~ Multi Party System.
~ Prime Minister as Head of Government.
~ Several Departments and Institutions.
~ Highest rate of Foreign Investment Control.

LEGAL:

Legal jurisdiction is with the common courts in Aruba and the Netherland Antilles.
Independent but adapted from Dutch Law.

ENVIRONMENTAL:

Water Temp	28°C	Air Temp	27°C
Standard deviation	2°C	Standard deviation	4

Coastline Character: west = sandy
east = cliffs, rocky, small beacheszzz

ECONOMICAL:

GDP	2.205 Billion $	Export	1,276 Billion $
GDP per Capita	21.800 $	Import	2,016 Billion $
Budget Revenue	547 Million $	Industries	
Budget Spent	637,4 Million $	~ Tourism (60-65% of GDP, 65-70% of Employment)	
Budget Deficit	-4%	~ Transshipment Facilities	
Taxes	24,4% of GDP	~ Banking	
Inflation	4,4%	~ Gold & Phosphor Mining	
Financial Support	EU Development Fund.		

SOCIAL:

Demographics:

Population	107.635 Inhabitants
Growth Rate	1,4%
Density	564 / km²
Urbanization	47%
Fertility Rate	1,84 Average
Household	4,1 People
Language	Papiamento 66,3%, Spanish 12,6%, English 7,7%, Dutch 5.8% (Official)

Tourism:
Highest tourist density in the caribbean region. Very hospital and warm people. High living standards. Good health system.

TECHNOLOGICAL:

Electricity

Newest Electricity Plant built in 2000 - 35 MW steam turbine generator fueled by oil
Oldest turbine from 1950

Max Capacity	149 MW
Average Demand	77 MW
Peak Demand	100 MW

Rates:
Residential = 14 - 18,5 Cent/kWh
Commercial = 15 - 18,5 Cent/kWh
AC in Commercial use = 13,7 Cent/kWh
Noncommercial = 15 - 18,5 Cent/kWh

Fuel Surcharges on electricity 0,0869 AFL/kWh.

Water

Fresh Water Capacity	42.000 mtpd
Average Consumption	36.000 mtpd = 220l pppd.

2nd largest desalination plant of the world.

Gas

24.000 Clients in commercial and non-commercial markets.