



The experience of Guadeloupe

Energy efficiency in buildings and
local energy policy

Energy demand and production in Guadeloupe



Energy consumption :

5 700 GWh in 2011, 400 000 inhabitants

- ➔ Fossil fuels : 70%
- ➔ Renewables : 4%

From 2000-2011 :

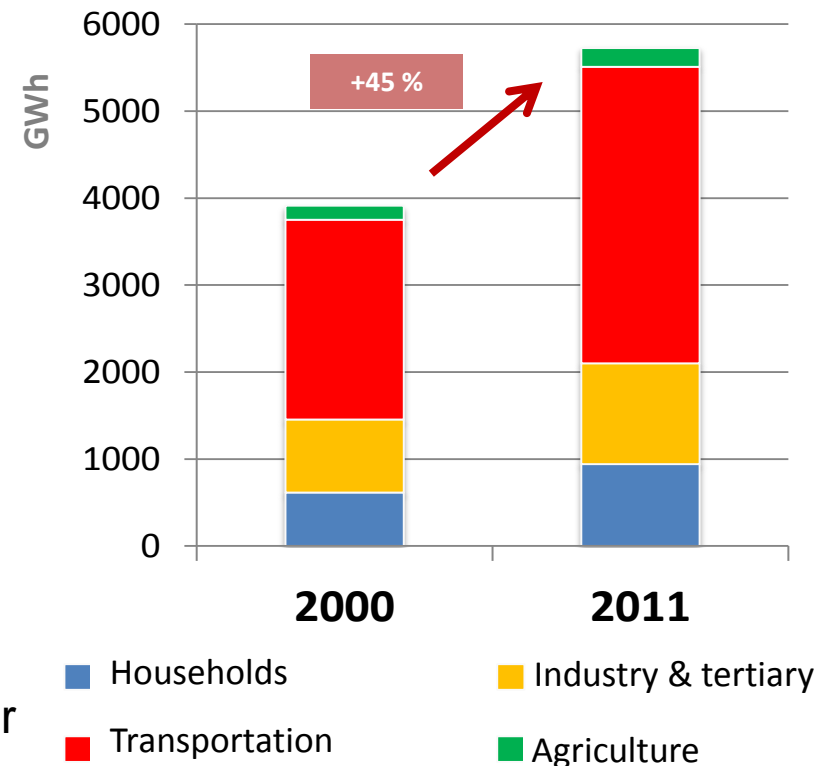
- ➔ Vehicle fuel : x 2
- ➔ Electricity demand : +54%

Renewables : 4% (2000) of final energy demand

Electricity demand : 1 700 GWh.y

Emerging needs :

- ➔ Transportation : fast increase of the number of road vehicles
- ➔ Electricity : increasing needs for the domestic and tertiary sectors



Our objectives



Objectives	2020	2030	2050
PRERURE / SRCAE 2012			
Electricity production	50% REEn	75% REEn	Energy autonomy
Final energy consumption	25% REEn	50% REEn	
2015 Energy transition law			
Objectives	50% REEn	Energy autonomy	

How to achieve these ambitions ?



Guadeloupe has the ability to produce local legislation :

- ➔ Thermal Regulation in Buildings : the “RT-G”,
- ➔ Mandatory Energy audits :
more than 2 000 audits collected and analyzed,
- ➔ Technical requirements for imported appliances :
Air-conditioning with Energy Efficiency Ratio $\geq 3,2$,
- ➔ Raising public awareness on energy saving solutions and costs,
- ➔ Specific grid access conditions for more flexibility

A unique approach in the Caribbean.

Get to know how we use energy

Example in the residential sector

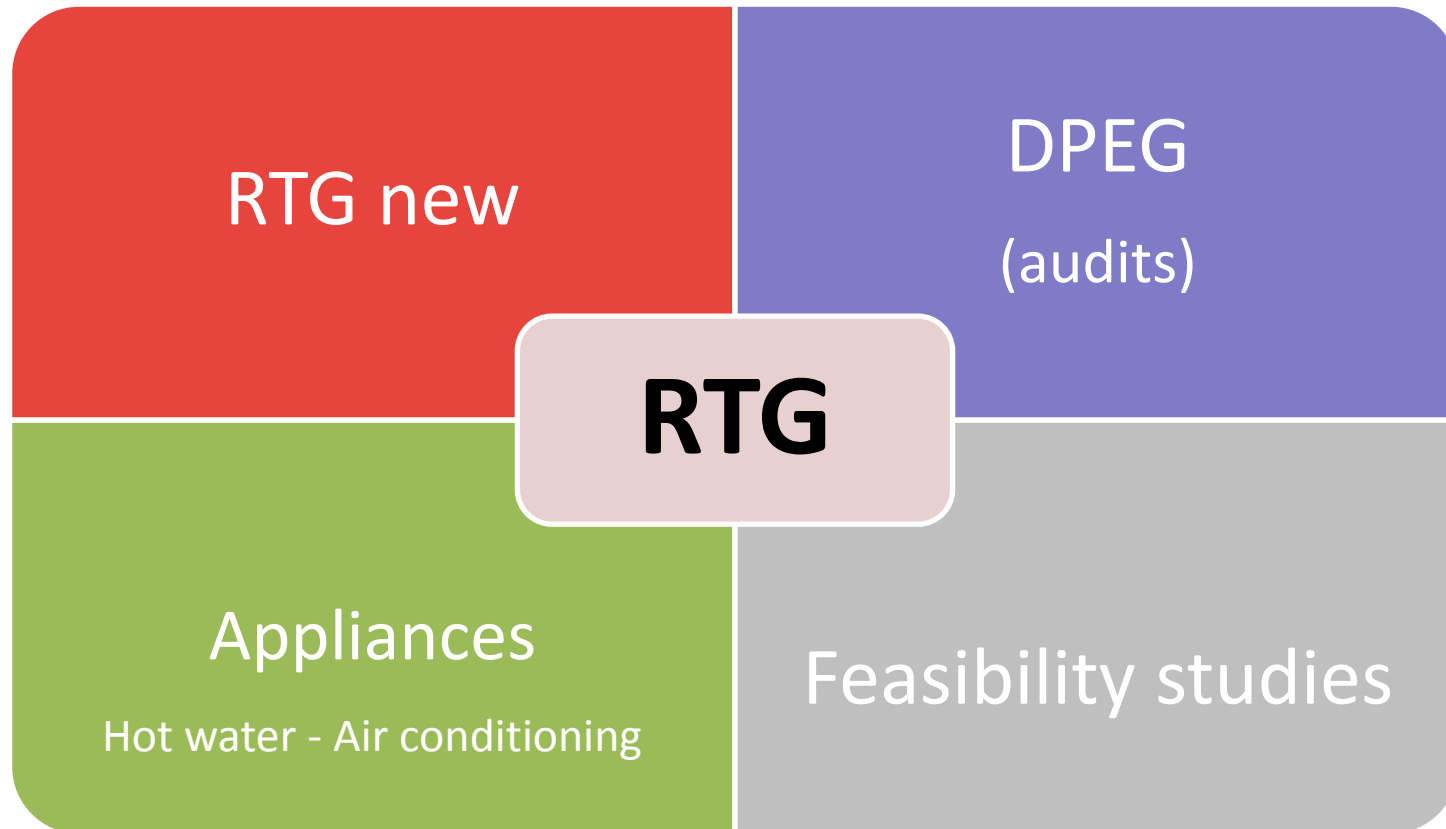


Consommation d'énergie par type d'habitat



Typologies d'habitat	Représentativité de la typologie		Conso annuelle		Indice DPE moyen		
			Par logement	Total	kWh _{ep} /m ² /an	Classe énergétique	
INDIVIDUEL	Habitats traditionnels	5,13%	8 556	3041 kWh	26,0 GWh	139	B
	Maison antillaise ancienne	23,71%	39 575	3970 kWh	157,1 GWh	149	B
	Villa antillaise récente	26,30%	43 887	5008 kWh	219,8 GWh	186	C
	Villa résidentielle	14,14%	23 590	5096 kWh	120,2 GWh	189	C
	Logement individuel en bande	5,96%	9 954	4381 kWh	43,6 GWh	208	D
	Total	75,24%	125 562	4489 kWh	566,8 GWh	172	C
COLLECTIF	Collectif social	14,33%	23 915	4220 kWh	100,9 GWh	208	D
	Collectif privé	10,43%	17 403	4071 kWh	70,8 GWh	188	C
	Total	24,76%	41 318	4190 kWh	171,8 GWh	201	D
GLOBAL	100%	166 880	4055 kWh	738,5 GWh	164	C	

Focus on the RT-G



The RT-G



- Mainly new residential, commercial and public buildings
- Retrofits concerned if $> 150 \text{ m}^2$ or 30% of surface concerned
- Objectives :
 - Reduce the use of aircon while preserving the thermal comfort (considering the different climate zones existing in Guadeloupe)
 - Leave the freedom to building designers to achieve energy performance
 - Propose an easy to implement and “agile” framework
- Means :
 - Methodology to achieve energy performance objectives (building / ref. solution) :
 - Primary energy needs for cooling and lighting
 - Internal thermal comfort, considering natural ventilation and localization of the building
 - Incentive to perform energy efficiency conception studies
 - Control of conformity through mandatory energy audits (new buildings, renting and real estate market)

What next ?



- **Keeping on :**
 - Adopting local regulation on energy
 - Improving the RT-G
 - Getting to know how we use energy

- **INTERREG 5 :**
 - Energy efficiency in buildings will be a strategic issue along with geothermal development, clean transportation ...
 - Get to know who is interested
 - Start negotiations during 1st semester 2016
 - Start the project 1st semester 2019