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Caribbean Association of Banks

History of Financing ESCO Projects

Success and Challenges

Caribbean Energy Chamber

9th July 2025

AGENDA

- EDL Overview
- ESCO Proof of Concept – Small Projects
- Financing Challenges
- Successes
- The Future – Market Size

1. EDL+ Overview

Introduction to Energy Dynamics Ltd

DYNAMIC ENERGY EFFICIENT SOLUTIONS

- Commenced in 2000
- Provides Energy And Environmentally Friendly Solutions
- Operates throughout the Caribbean
  - Barbados
  - Bahamas
  - Belize
  - Eastern Caribbean
  - Dominican Republic
  - Jamaica
  - Dutch Caribbean – St. Maarten, Aruba & Curacao
  - **Puerto Rico**
- **Customers – IDB, Caricom, CDB, NGC, Carilec, OLADE, GK, Methanex, UWI**

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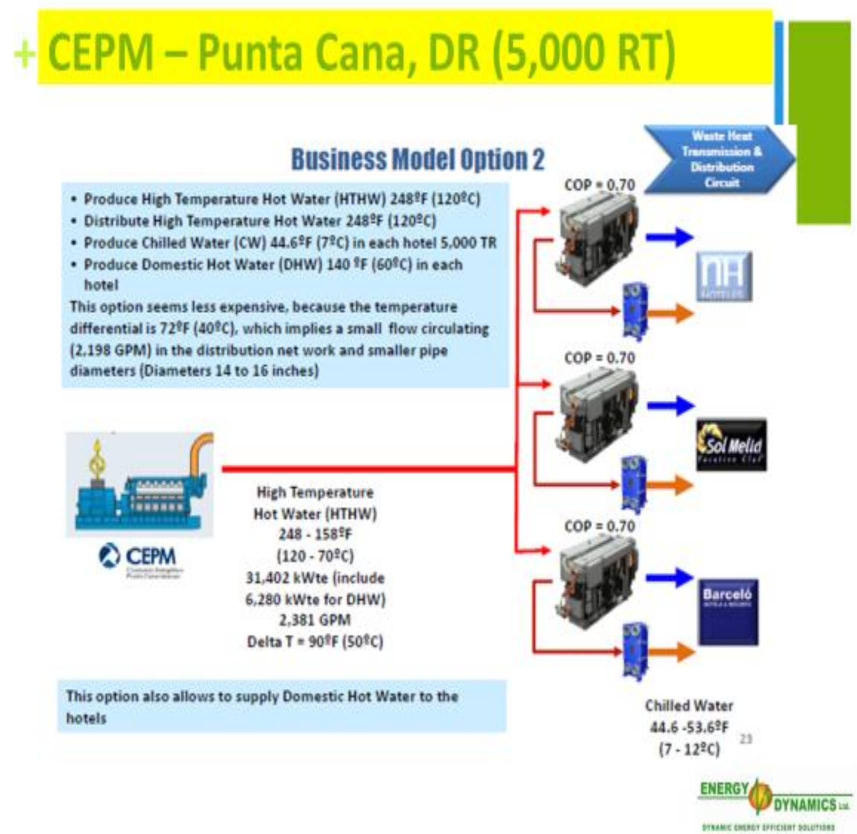
PAST PROJECTS : Renewable Energy

- **Digicel Jamaica – First Caribbean Solar Cooling Project(150RT)**
- IDB funded 3 * 7 kW Solar PV project in Barbados
- Solar Thermal using Vacuum Tube Technology

+CEPM Punta Cana – DR

First District Cooling CHP Project in Caribbean



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Past Projects

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➢**First Biomass Cooling in Caribbean - Grupo Rica in Dominican Republic (1,600 Rt).**

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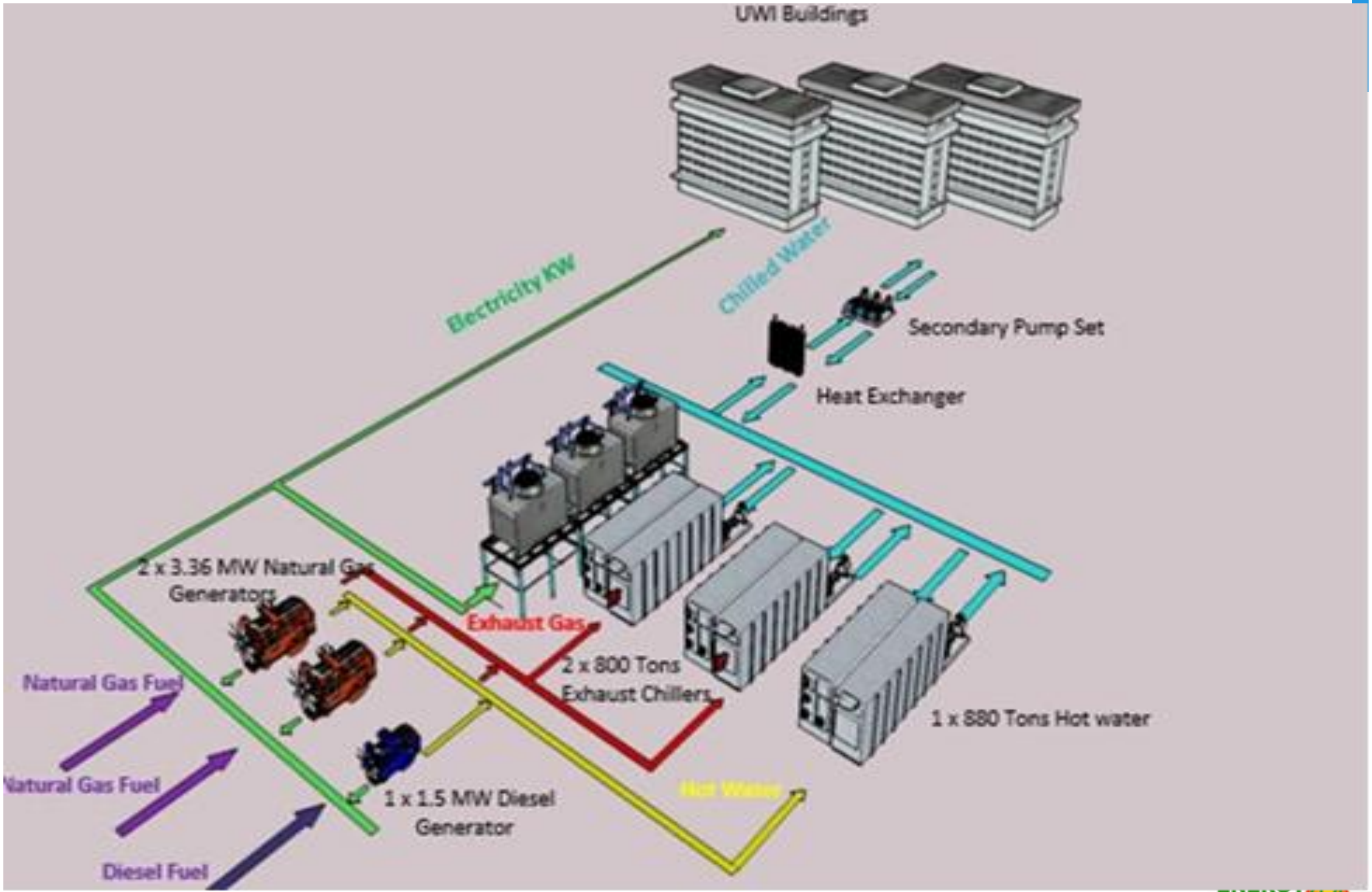
UWI Mona CHP 9.0 MW & 2,400 RT AC



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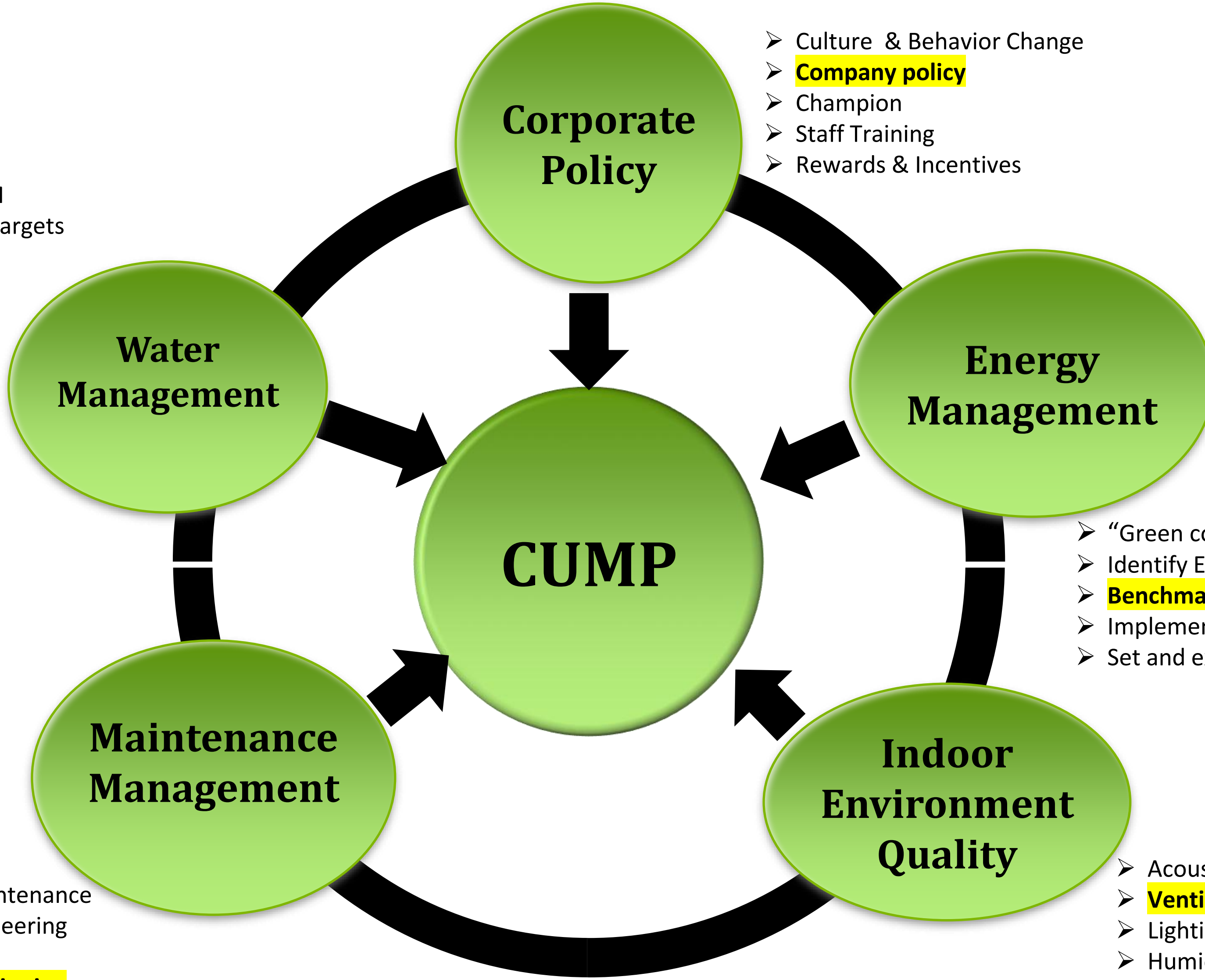
+ Corporate Utility Management Programme

- Identify WSM
- **Benchmark**
- Implement WSM
- Set and exceed targets

- Culture & Behavior Change
- **Company policy**
- Champion
- Staff Training
- Rewards & Incentives



- "Green consciousness"
- Identify ESM &REM
- **Benchmark**
- Implement ESM &REM
- Set and exceed targets

- Preventive Maintenance
- Reliability Engineering
- CMMS
- **Retro-Commissioning**
- Duct Cleaning

- Acoustics
- **Ventilation / CO2 levels**
- Lighting levels
- Humidity / Moisture

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2.0 ESCO Proof of Concept

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COLFIRE Trinidad – Proof of ESCO Concept

- 2017 - First ESCo project that EDL performed
- Three (3) year ESCO Contract with Colfire (Trinidad Insurance Company)
- Energy Efficiency (EE) Only:
  - Lighting Retrofit
  - Energy Management
  - Controls
  - Training Staff
- Self Financed
- Energy Savings – 42%

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2018 Energy Chamber- Best Green House Gas Reduction Award

https://www.youtube.com/watch?v=OCyJ8u9zci0&feature=youtu.be

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EDL CARIBBEAN ESCO EXPERIENCE

TRINIDAD

- Started in 2017
- Energy Chamber Award in 2018 – Best Green House Gas Project
- Initially Self Financed Projects then Equity Partner
- Had Five (5) contracts
- Colfire saved over 40%
- Covid-19
- Now restarting in Trinidad

JAMAICA

- Three Projects
- New Business Model – EE + Solar Pv / BESS +CCHP (LNG)
- Approx. 70% Energy Savings
- Challenges with Financing
- Excellent market for ESCOs

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3.0 Financing Challenges

ESCO Components

- Application Engineering
- Feasibility
- Design
- Estimation
- Purchasing & Logistics

- Project Management
- Testing & Commissioning
- Maintenance
- Energy Management over contract life
- Measurement & Verification

- Contract Approval
- ESCO Savings Contract
- Equity Partner Contract
- LNG Contract
- Debt Financing Contract
- Credit Guarantees

- Customer Audited Financials
- Equity Financing
- Debt Financing
- Financing Rates

Equity & Debt Financing

- **Equity Financing**
  - EDL provided own equity and debt for initial small projects
  - CABEF – Caribbean Basin for Sustainable Energy
    - Provided Equity Financing for Larger Jamaican Projects
    - **Formation of Special Purpose Vehicle (SPV)**

- **Debt Financing**
  - Cabef Provided Debt Financing for many small Trinidad ESCO projects
  - GK Capital Jamaica – Debt Financing for larger Jamaican Projects
  - ESCO Financing – Similar to Project Financing (Non-Recourse Financing, Cash Flows from Savings provide instalments).
    - Cash Flow Waterfall – Maintenance, Debt Financier, Equity Financier, ESCO
  - FI Insist on Credit guarantees besides the Energy Savings from Projects
  - Insist on both Equity Partner and ESCO providing Credit Guarantees

- **Credit Guarantees**
  - Cash Flow from Energy Savings Insufficient
  - Require Business and Personal Guarantees
  - **CRAF – One Solution**

4.0 Successes

EDL SUCCESSES

- **Eight (8) Successful Projects completed**
- **Project Pipeline – US$6.0M**
  - Trinidad – US$1.0M
  - Grenada – US$ 3.7M
  - Jamaica – US$ 1.5M
  - St. Lucia – US$350k
- **Combining EE and RE (Solar PV) provides maximum savings with faster returns**

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5.0 The Future

Simple Payback (years) of Selected EE & RE Systems

Energy Cost US$/kWh	EE Lamps (12 hrs/day)	Effective Maint. / Re-Comm / Energy Mgt.	VRF A/C	SWH	Solar PV Systems
0.50	0.08	0.20	1.06	0.73	2.0
0.45	0.09	0.22	1.20	0.81	2.22
0.40	0.10	0.25	1.33	0.92	2.5
0.35	0.12	0.29	1.52	1.05	2.9
0.30	0.14	0.33	1.78	1.22	3.33
0.25	0.16	0.40	2.13	1.47	4.0
0.20	0.20	0.50	2.66	1.83	5.0
0.06	0.68	1.64	8.88	6.11	16.7

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+CUMP Project Pipeline (2018)

Jamaica

Hotel	Investment Cost	Savings	Payback Period
BAY VIEW ECO RESORT	$16,228	$5,592	2.90
CARDIFF RESORT AND SPA	$104,782	$61,492	1.70
CARIBIC HOUSE	$15,650	$8,123	1.93
COURTLEIGH HOTEL AND SUITES	$686,055	$318,580	2.15
GLOUCESTERSHIRE HOTEL	$64,034	$25,805	2.48
ROUND HILL HOTEL AND VILLAS	$118,900	$61,185	1.94
SUNSET AT THE PALMS	$106,020	$112,225	0.94
BEACHES NEGRIL	$77,436	$88,367	0.88
NEGRIL PALMS	$52,420	$24,681	2.12
COUNTRY COUNTRY	$43,498	$25,391	1.71
MYSTIC RIDGE	$63,861	$16,445	3.88
Sub Total Jamaica US$	**$1,348,885**		

Barbados

Hotel	Investment Cost	Savings	Payback Period
The House	$80,146	$38,242	2.10
All Season	$106,984	$52,693	2.03
Blue Horizon	$85,974	$62,633	1.37
Ocean Spray	$31,522	$23,769	1.33
SOUTH GAP	$45,330	$14,762	3.07
DOVER BEACH	$89,690	$38,874	2.31
INFINITY ON THE BEACH	$53,881	$26,155	2.06
SEA BREEZE	$279,457	$91,914	3.04
Mangobay	$162,426	$87,592	1.85
TAMARIND COVE HOTEL	$77,833	$78,616	0.99
BOUGAINVILLEA BEACH RESORT	$175,509	$103,894	1.69
CRYSTAL COVE	$132,448	$70,249	1.89
ISLAND INN	$41,323	$44,637	0.93
OCEANS TWO	$106,907	$88,076	1.21
PIRATES INN	$66,376	$18,706	3.55
SOUTH WINDS	$227,942	$182,979	1.25
SUNBAY HOTEL	$128,131	$40,979	3.13
THE CRANE	$294,891	$423,030	0.70
TURTLE BEACH RESORT	$118,209	$106,632	1.11
BARBADOS BEACH CLUB	$133,112	$79,444	1.68
COLONY CLUB	$104,101	$46,522	2.24
REGENT	$18,708	$14,110	1.33
SOUTHERN PALMS	$180,834	$47,964	3.77
Sub Total Barbados US$	**$2,741,733**		

Bahamas

Hotel	Investment Cost	Savings	Payback Period
The Conch Inn Resort and Marina	$4,148	$16,452	0.25
FERNANDEZ BAY VILLAGE	$17,009	$4,189	4.06
GREENWICH CREEK LODGE	$22,725	$9,164	2.48
ORANGE CREEK INN	$12,758	$7,358	1.73
Orchard Garden Hotel	$24,084	$15,106	1.59
PELICAN BEACH VILLA	$28,480	$11,583	2.46
SANDYPORT BEACH VILLAS AND MARINA	$129,363	$77,176	1.68
ABACO BEACH RESORT	$394,374	$139,593	2.83
BEST WESTERN + BAY VIEW SUITES	$95,793	$35,228	2.72
SUNRISE BEACH CLUB & VILLAS	$48,128	$52,861	0.91
TREASURE CAY RESORT	$149,129	$277,408	0.54
Sub Total Bahamas US$	**$925,992**		

St lucia

Hotel	Investment Cost	Savings	Payback Period
Jade Mountain	$27,945	$72,155	0.39
Bel Jou Hotel	$82,138	$84,043	0.98
St James Club	$394,141	$369,379	1.07
Sugar Beach	$537,416	$450,315	1.19
Sub Total St. Lucia	**$1,041,640**		

Caribbean Export

Manufacturers	Investment Cost	Savings	Payback Period
Banks Barbados	$685,096	$157,733	4.34
Goodtimes Snacks	$49,335	$12,296	4.01
Grenada Distillers	$321,927	$119,502	2.69
MACS PHARMACEUTICALS	$47,763	$8,866	5.39
PA Benjamin	$58,467	$16,733	3.49
Barron Foods	$91,451	$21,649	4.22
Sub-Total Manufacturing	**$1,254,039**		

GRAND TOTAL CUMP US$ $7,312,288

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FUTURE – ESCO Market Potential

- Hotel Sector – US$150M+++
- Manufacturing - US$25M
- Universities – US$20M
- Hospitals & Health Care – US$30M+++
- Residential – US$8k/home – US$B

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Thank You

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