



Sustainable Energy Economy: Are we there yet?

Paul Grod, President & CEO, Rodan Energy

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About Rodan Energy

- We are an Ontario-based leading smart grid company delivering integrated energy solutions to electricity consumers, distributors and power producers.
- Combining our expertise in metering, energy management and demand response, we are enhancing power system reliability and price responsiveness in today's green energy sector.



Introduction

- What defines a sustainable energy economy?
 - Environmentally sustainable
 - Reliable
 - Economically viable

Catalyst for Change in Ontario

What's causing this dramatic change?

- Closing down the Coal in 2014
- AMI (Smart meter) roll-out
- Green Energy Act (Ontario) passed May 14/09
 - Policy commitment to conservation, smart grid and renewables
 - Feed-in tariffs to procure renewables and distributed power
 - Incentives for demand management

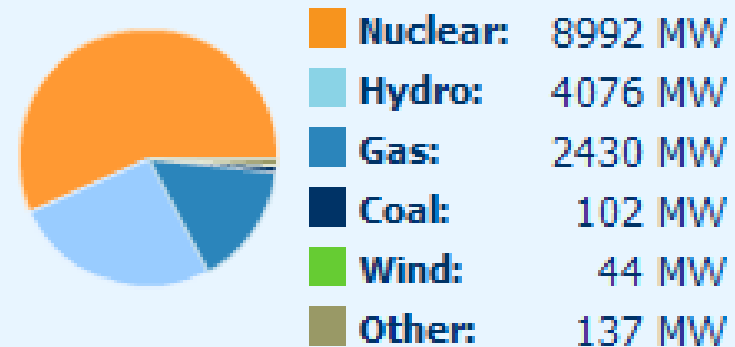
Today's Power Market in Ontario

ELECTRICITY SYSTEM STATUS →

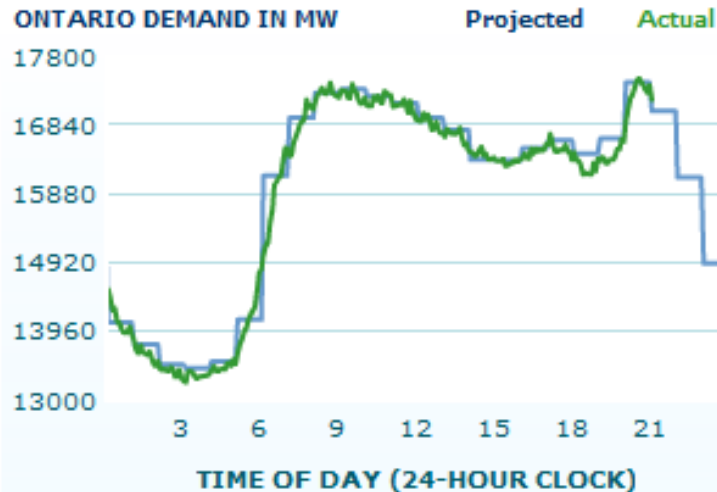
System Status Good



GENERATION BY FUEL TYPE →



Fuels used to meet demand Apr. 7 - 19:00-20:00



ONTARIO DEMAND

16,436 MW

At 8:00 PM EDT - Apr. 7, 2011

HOURLY PRICE

3.51 ¢/kWh

GLOBAL ADJUSTMENT

3.93 ¢/kWh

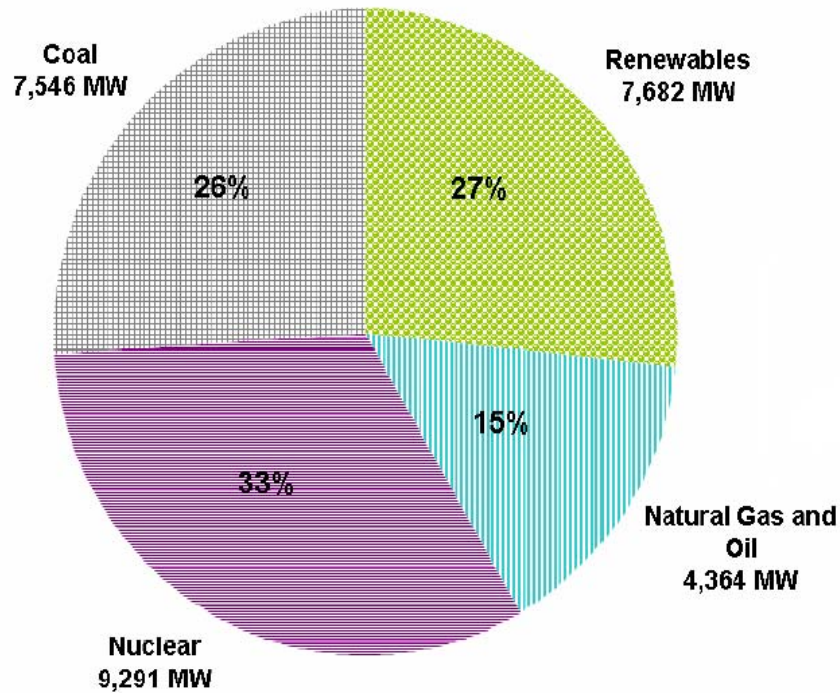
TODAY'S PROJECTED PEAK

17,442 MW

at 9:00 p.m.

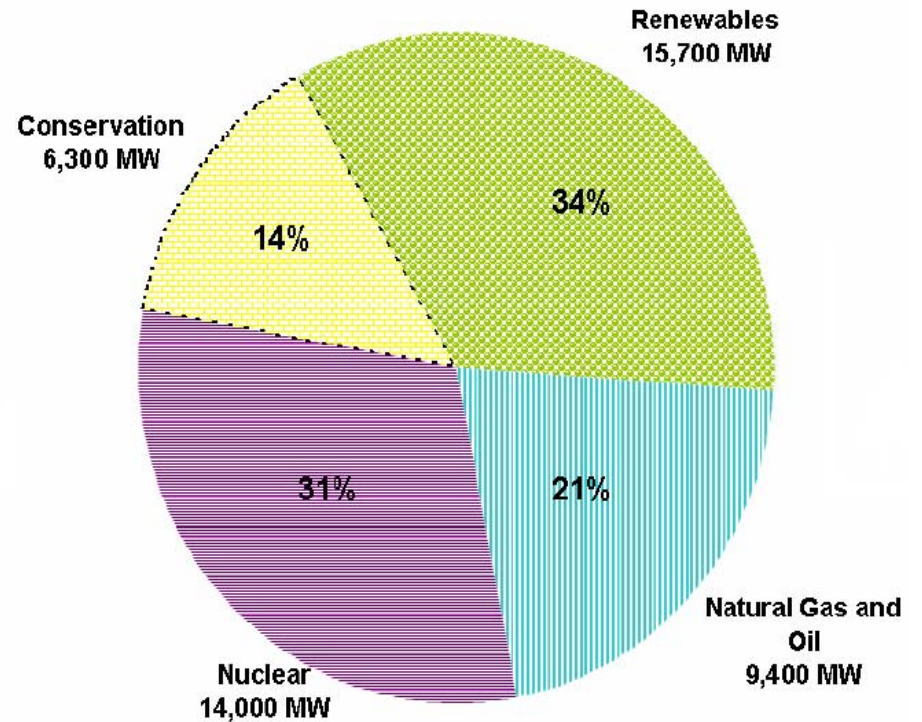
Ontario's Electricity Supply Mix

2003 Supply Mix



Total 28,883 MW

2025 Supply Mix

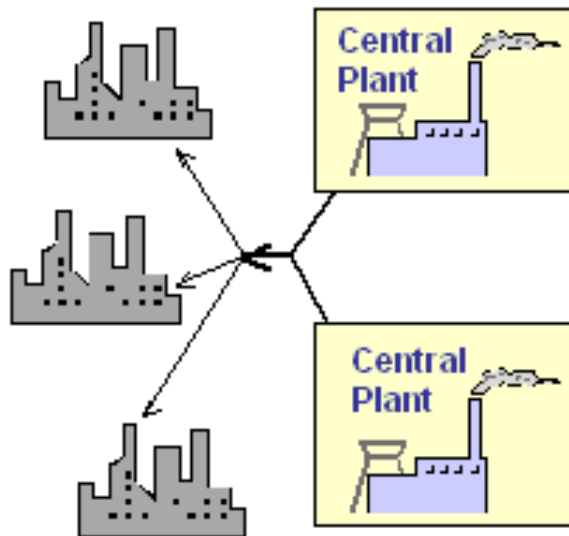


Total 39,100 MW

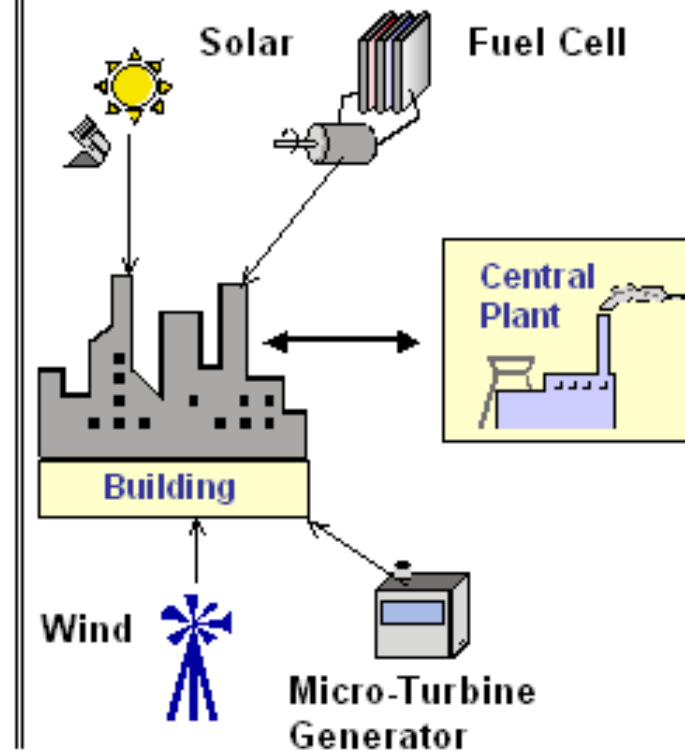
Power System Primer

CENTRAL vs. DISTRIBUTED GENERATION

Central Generation



Distributed Generation



The Smart Grid



Price of Power

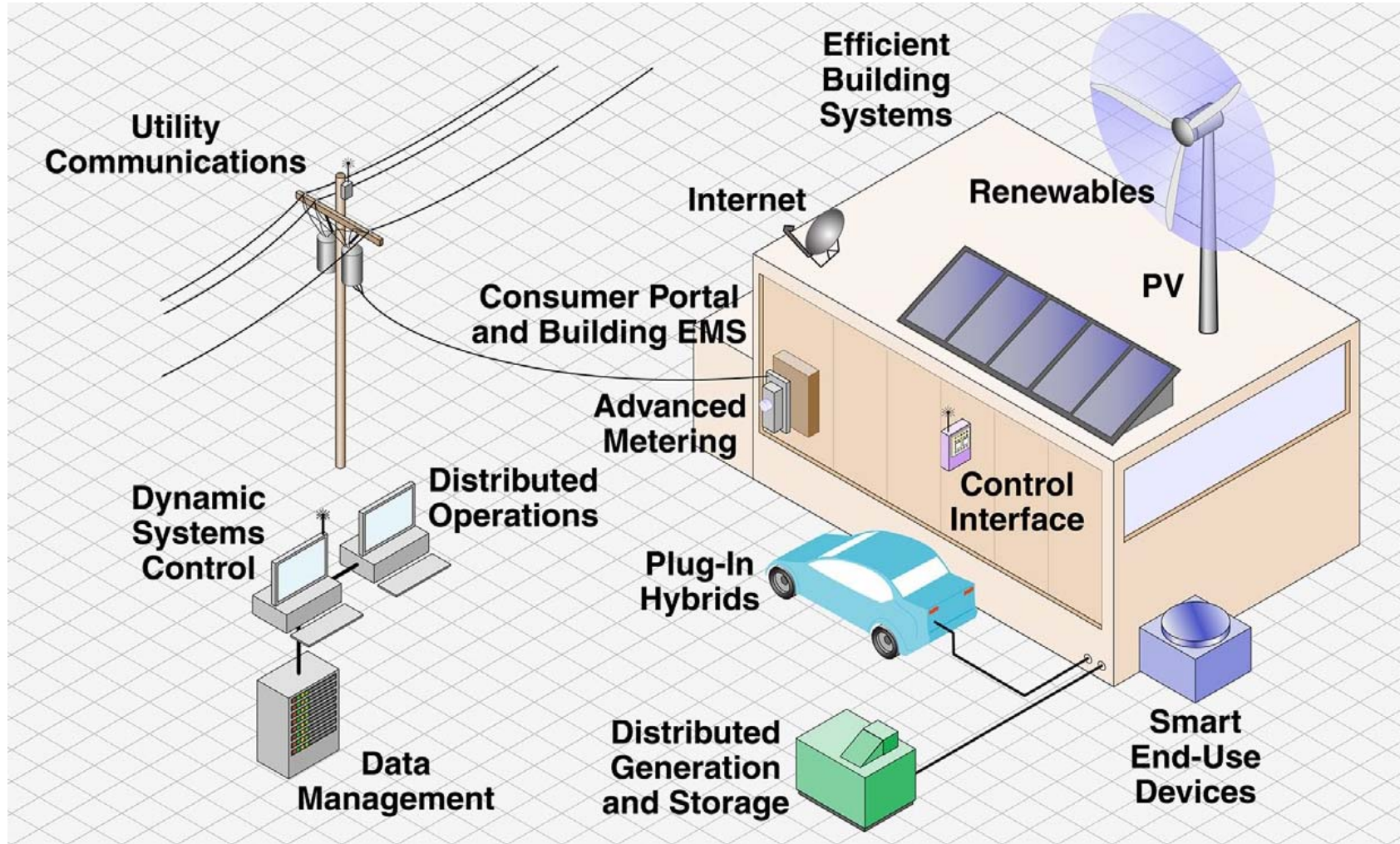
| Ontario's Energy Supply Mix | | | |
|-------------------------------|---------------------------------|--------------------|------------------------------|
| SUPPLY TYPE | FUEL TYPE | LOCATION | CURRENT/PROPOSED PRICE (kWh) |
| Peaking fuel for reliability* | 8% natural gas | various plants | 8.5¢ - 14¢ |
| Renewable Opportunities** | TBD% – new renewables portfolio | wind | 8¢ - 44.3¢ |
| | | solar | |
| | | biomass | |
| | | biogas | |
| | | landfill gas | |
| | | new hydro | |
| | 1-2% rooftop solar*** | | 53.9¢ - 80.2¢ |
| Baseload 76%* | 53% nuclear | Pickering | 6¢ - 7¢ |
| | | Darlington | |
| | | Bruce | |
| | 23% hydroelectric | Niagara Falls | 5.7¢ - 6.2¢ |
| | | St. Lawrence River | |
| | | Northern rivers | |

* Existing supply

** Emerging supply

*** 1% = approximately 100,000 residential rooftops

Understanding the Smart Home or Business



The Smart Grid



Are we there yet?

- Times are changing and Ontario is on its way
- Renewables, the smart grid and demand response are the killer apps of a sustainable economy
- Stay the course and get the politics out of power
- Opportunity to lead the world
- Set aside delusions that new technologies “will save us.”
- Be prepared to pay more for power
- We need business innovators



Enabling tomorrow's Smart Grid today

Paul Grod, President & CEO

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