



Our Green Energy Act

ACEEE 5th National Conference
“Energy Efficiency as a Resource”

Marion Fraser
Fraser & Company

September 2009
Chicago

To all our **American** Neighbours:
Please come back and visit us!

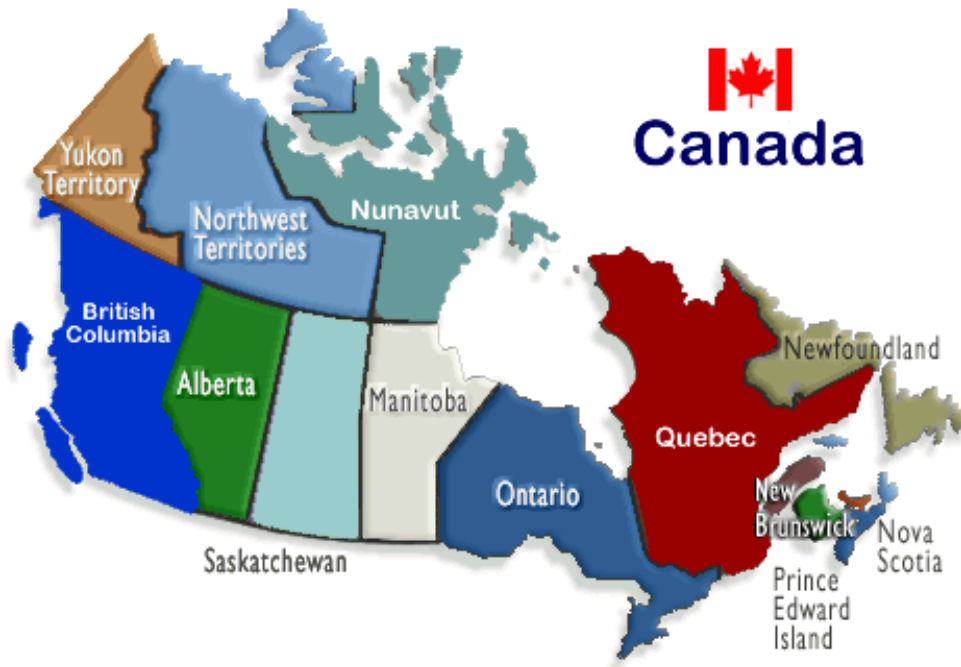
Ontario Statistics:

Population: 13 million

GTA: $\geq 6,000,000$

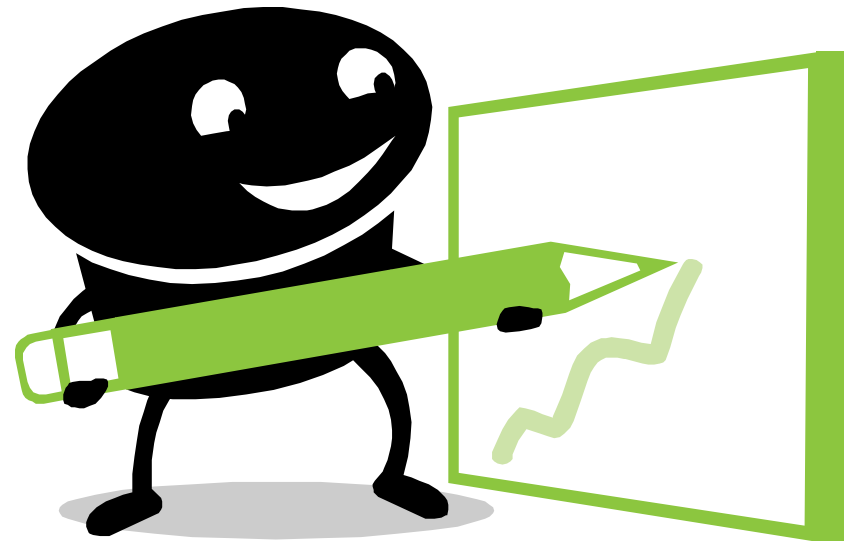
Size: +400,000 square miles

Lakes: 250,000

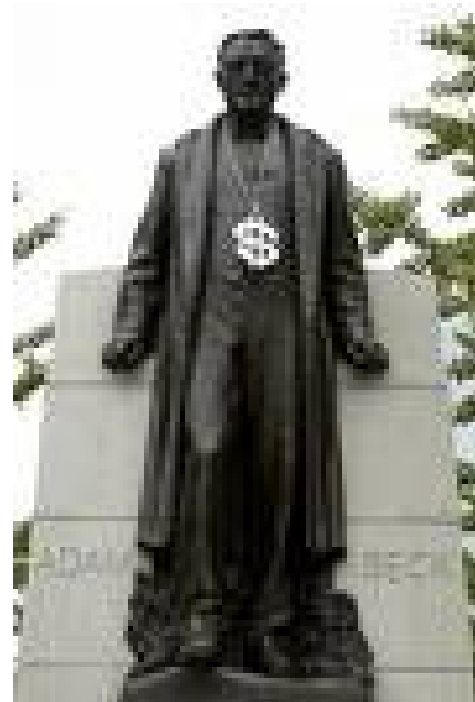
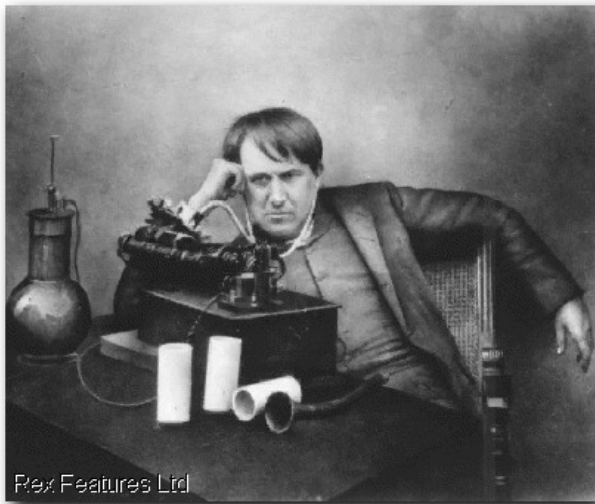


Overview

- Historical Context
- Political Context
- The Policy Gap
- The Green Energy Act



Historical Context



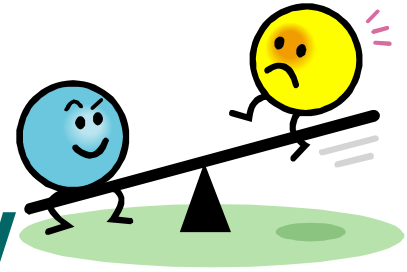
Energy Efficiency as a Resource: Natural Gas – long term evolution

- Both major gas utilities have delivered “classic” DSM – since 1995
 - **Enbridge’s** customers’ benefits: over \$1.4 billion net energy bill savings
 - Gas consumption down by over 3.6 billion m³
 - 2010 Budget \$24 million

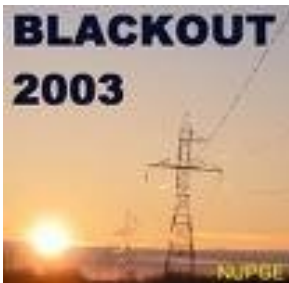


uniongas
A Spectra Energy Company

Electricity: Familiar Seesaw



- Pre 1989: Electricity Productivity
- 1989 to 1993: Demand reduced by 1204 MW
 - 77% of savings from energy efficiency
- 1993 – 2003: “Market Chaos” – “Lost Decade”
- 2004 – 2008: “Building a Conservation Culture”
- 2009: “Ontario’s Green Energy Act

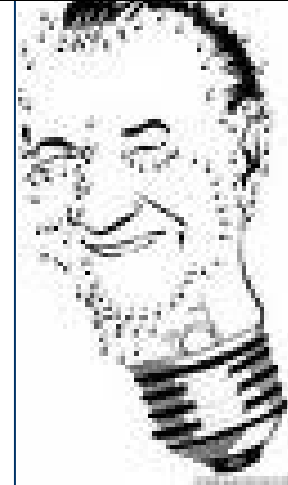
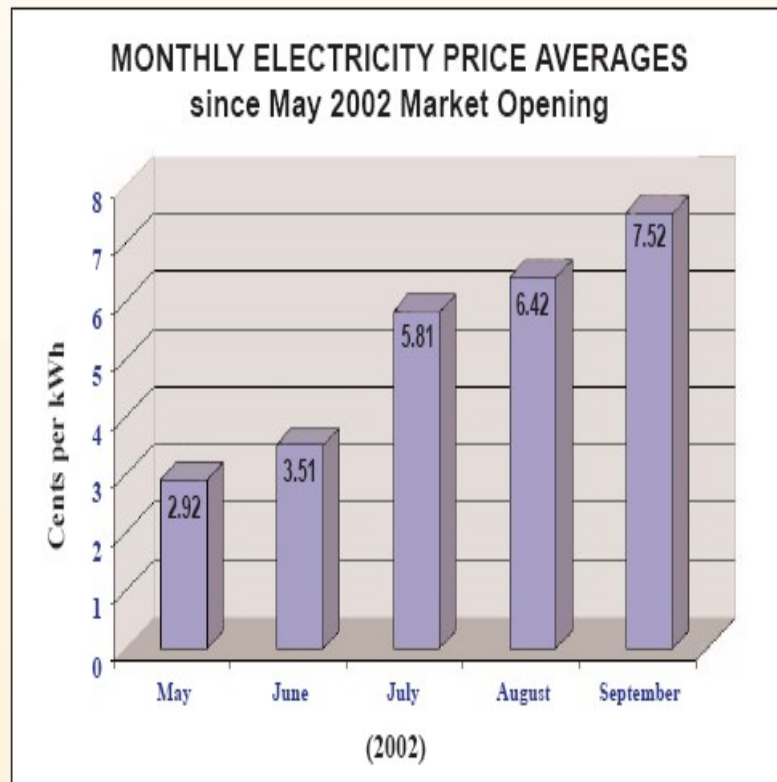


Political Context: Queen's Park – Ontario's Legislature



Conservative Government's Market Failed

Price Volatility, No new Supply



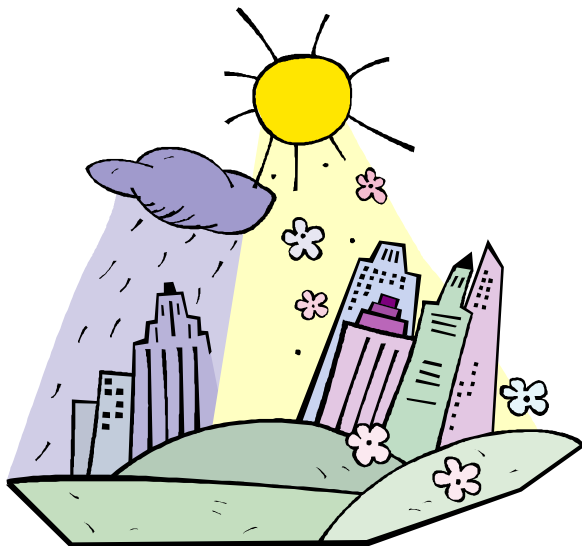
Liberal Government Elected in late 2003: First Objective: Restoring Stability

Immediate Action

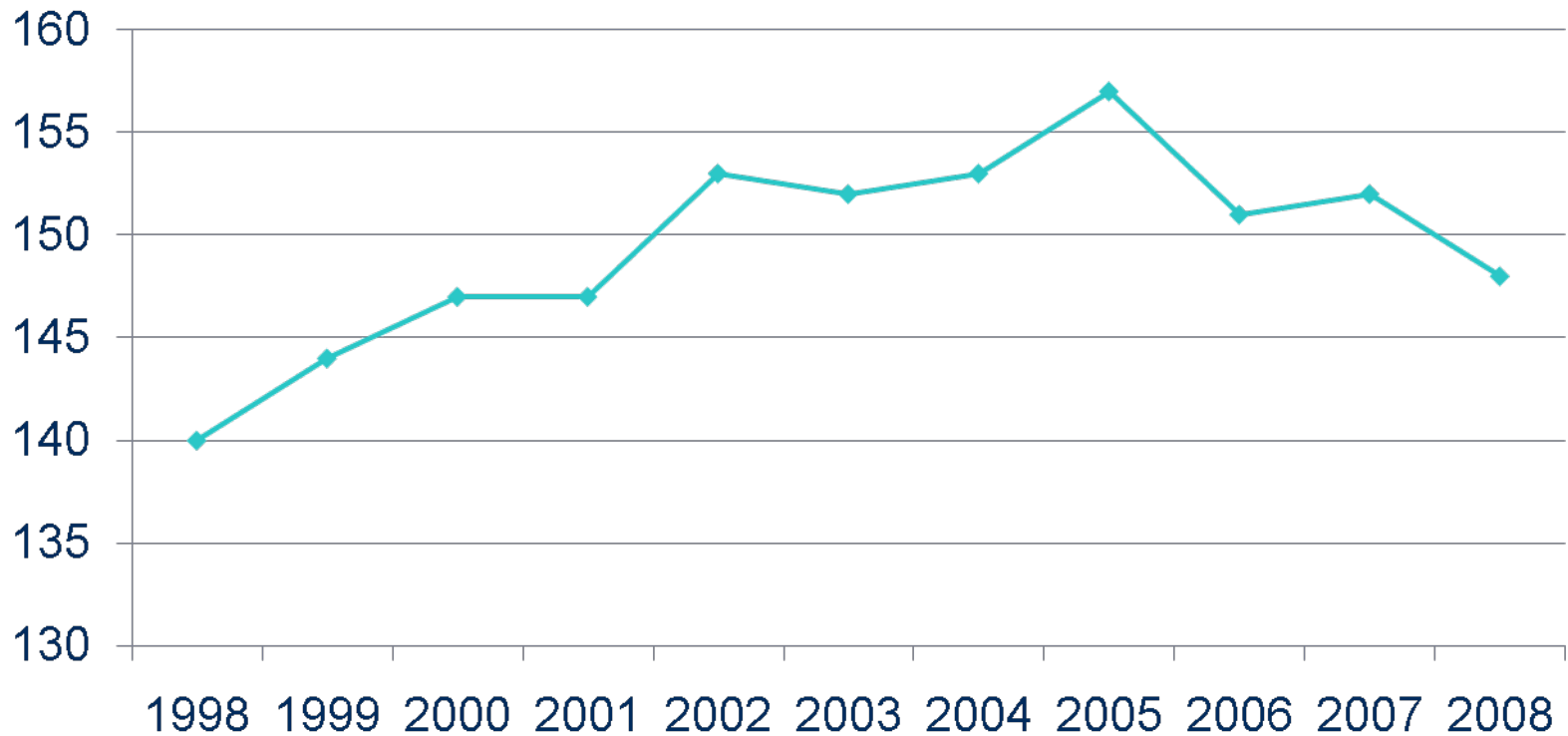
Electricity Conservation and Supply Task Force

Creating a Blueprint

Building the Foundation

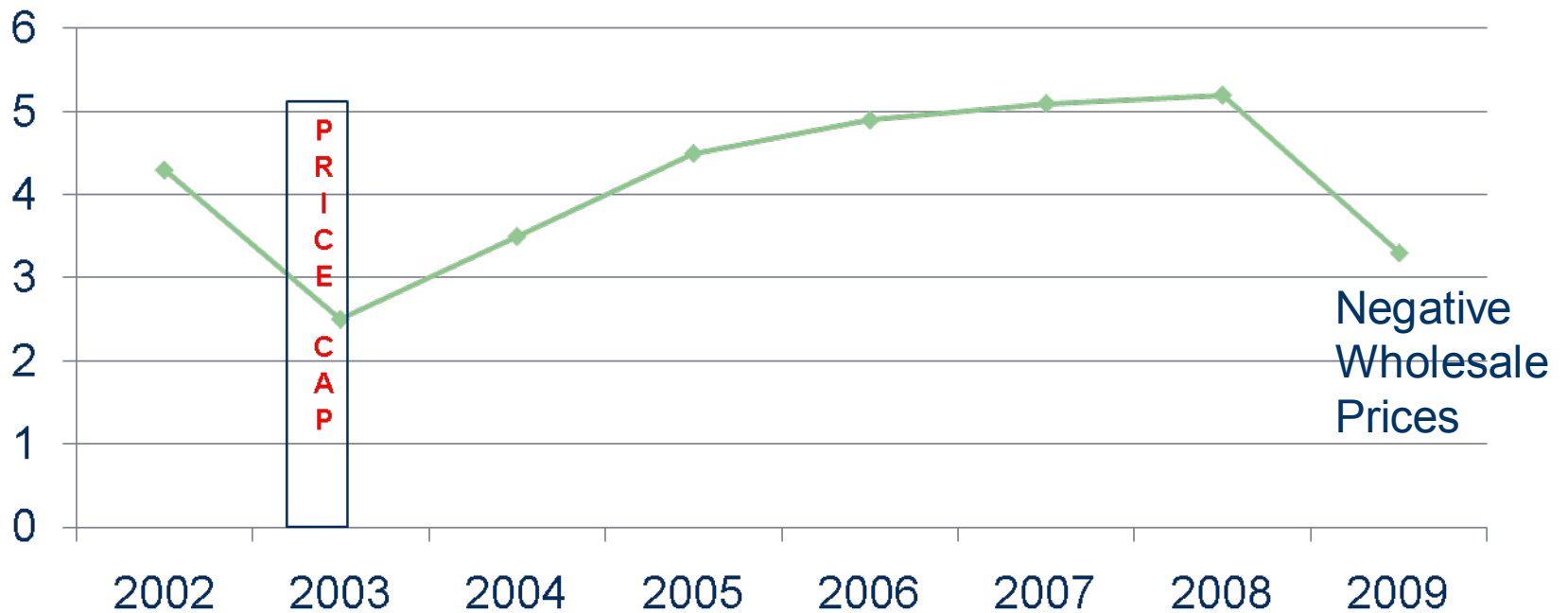


Ontario's Annual Electricity Consumption (TWHs)



Commodity Price

Cents/kWh



The Policy Gap

with Apologies to T.S. Eliot



Between the idea
And the reality
Between the motion
And the act

Falls the Shadow



Ontario's Green Energy Act



Why a Green Energy Act?

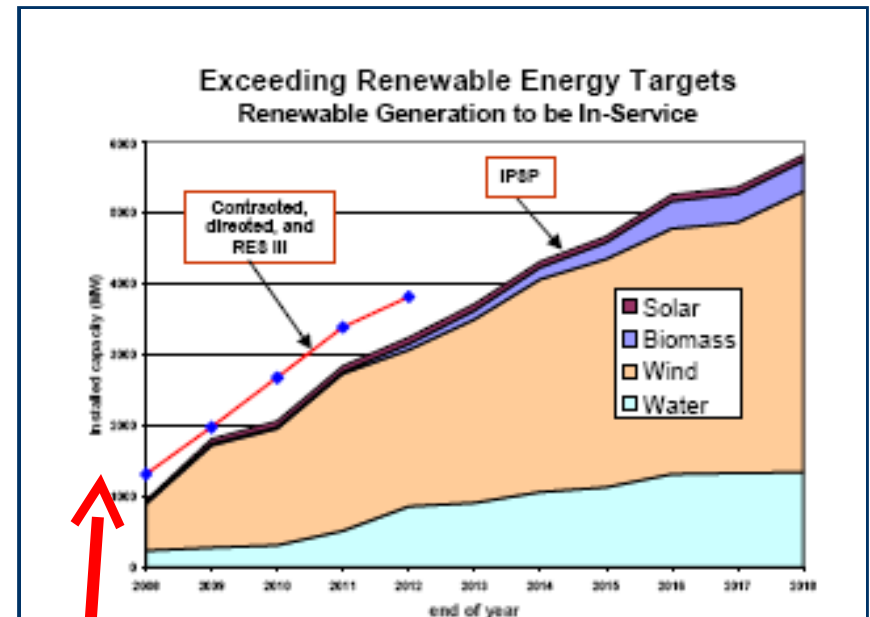
- Systemic Barriers to green energy embedded in existing legislation, regulations, rules, processes and institutions
- Status Quo - Inertia
- Programs, like RESOP, weren't delivering results or having desired impact
 - MW
 - Involvement of First Nations, Farmers, Community Power
 - Economic Development



Renewable Energy Results

- - Shortfall

- Targets
 - 2007 - 1350 MW
 - 2010 - 2700 MW
- 2007 Results – Installed
 - RESOP: 27 MW
 - RFPs: 488 MW
 - Total: 515 MW
- 2010
 - RESOP “Contracts”: 1393 MW
 - RFPs built & planned: 924 MW
 - Total: 2317 MW



Installed Capacity

Founders - Green Energy Act Alliance



IVEY foundation



David Suzuki Foundation

What is “Green Energy”?

- Conservation “First”
 - Cheapest kW is a saved kW
- Renewable Energy
 - Low environmental impact
- Clean **Distributed** Energy
 - Waste heat recovery, district energy, CHP (high efficiency)
- Primary Procurement Method
 - feed in tariffs



How did we Get Here?



Vision

- Make Ontario a global leader in clean, renewable energy and conservation, creating thousands of jobs, economic prosperity, energy security and climate protection



Intent

- Enable all Ontarians to participate and benefit from green energy as conservers and generators, at the lowest total cost to consumers.

From This



Valuing Green Energy

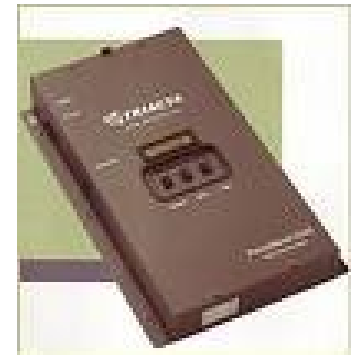
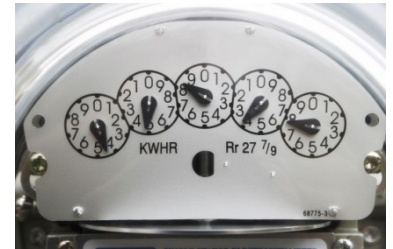
- determine what is “economic” by counting **all** system benefits including: peak and average loss reductions, transmission and distribution savings and **externalities**
- Recognize added value of distributed energy and conservation from
 - avoided transmission and distribution capital
 - reduced line losses;
 - reduced redundancy requirements



Conservation – Potential is still huge

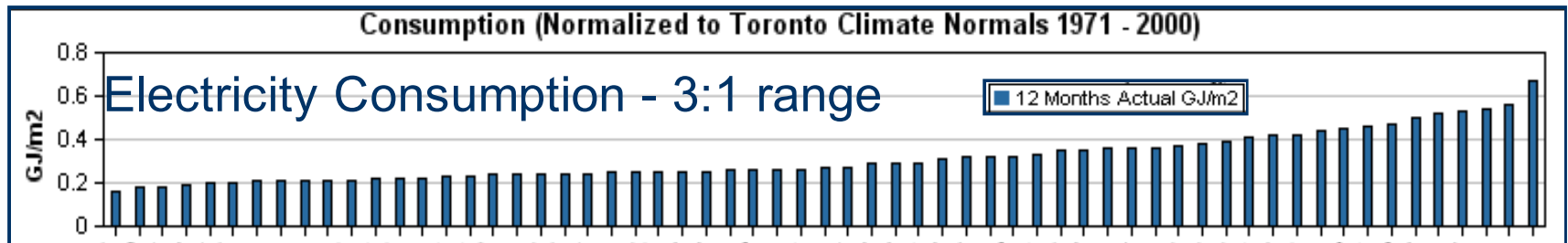
What is needed

- **Holistic and Comprehensive Conservation programs:** research, development, education, market transformation, training, codes and standards, monitoring and evaluation, water conservation, greening programs
- **Consumers make informed decisions:** rating systems, building labeling, energy performance benchmarks and energy assessment tools, improved codes and standards.
- **Financing programs:** communities, individuals and businesses
- **Education:** all Ontario students; training young and old
- **Smart metering and billing:** infrastructure in place for real-time pricing of energy (and water)
- **User pay:** through individual metering and sub metering



Bills not Rates

Learning from Experience: Benchmarking



Best
School

Energy use data of schools participating in the
Sustainable Schools program

Conservation in the Green Energy Act

- energy conservation – a priority resource.
- energy efficiency key in building code.
- leading energy efficiency standards appliances
- home energy audits prior to sale of homes.
- electricity conservation targets for local utilities.
- Increasing productivity in industrial sector
- targeted conservation measures for low income
- regulator must promote conservation, investments in smart grid renewable energy sources
- responsibility for monitoring progress against targets go to independent organization





NEW ENERGY PARADIGM

GREEN ECONOMY NEEDS GREEN ENERGY

**If not now – when?
if not Us – Who?**



Thank You