

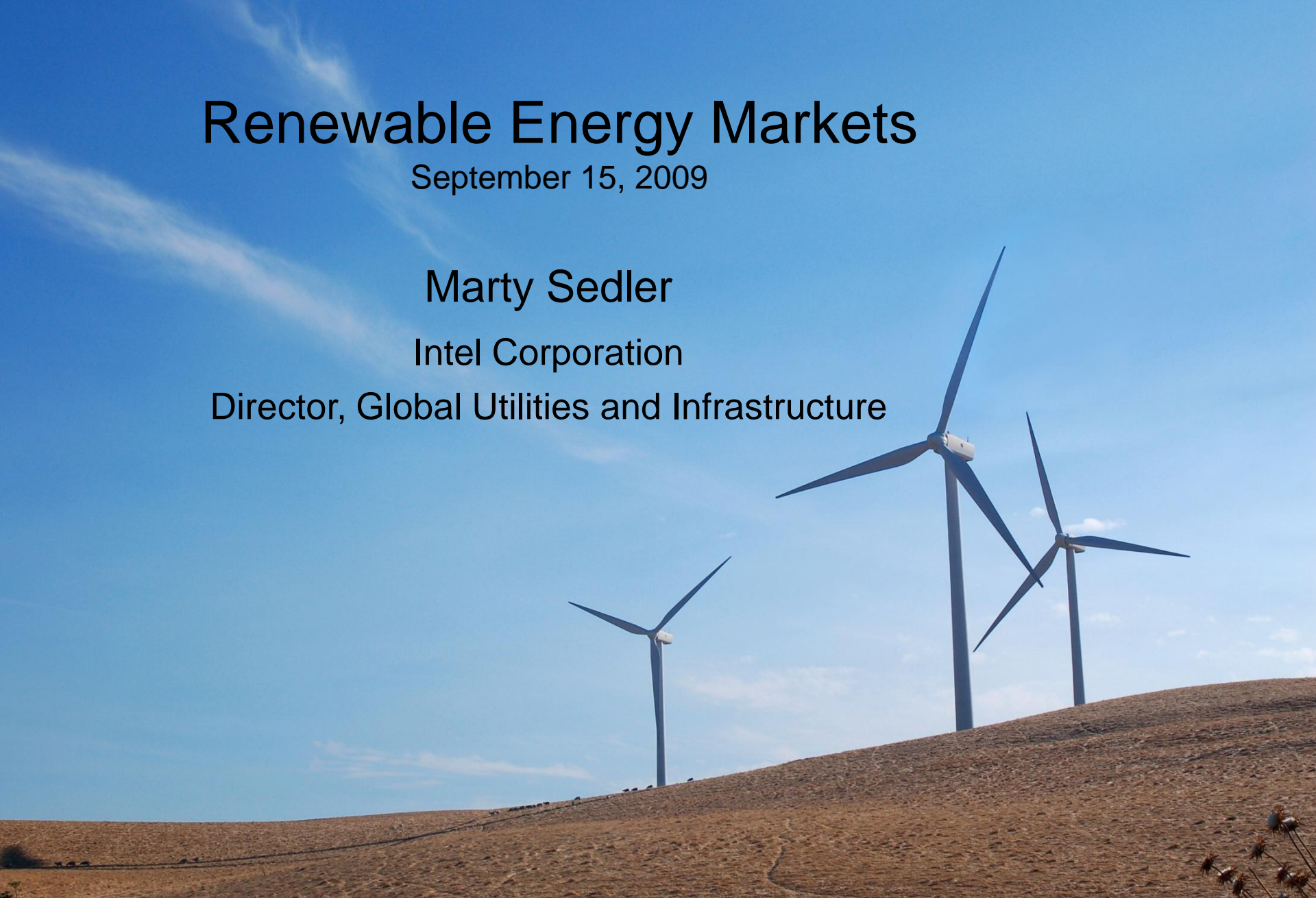
Renewable Energy Markets


September 15, 2009

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Intel Corporation

Director, Global Utilities and Infrastructure





Corporate Social Responsibility at Intel: *It's How We Do Business*

“Continuing our commitment to the highest performance in all we do—from product innovation to corporate responsibility—is good business.”

Paul Otellini, President and CEO

Eco-Technology

Sustainable
Manufacturing

Energy Efficient
Performance

Design for
the Environment

Policy &
Industry



**Operations/
Facilities**

Products

**Pro-active
Engineering**

**Strategy/
Rules**

Intel's Green Energy Management



Green Power Supply

- Intel is the Largest Voluntary Purchaser of Green Energy in the US**
- Portfolio specified purchase including wind/solar/bio-fuels/geothermal and low impact hydro, all Green-e.
- Additional purchases in Oregon makes Intel is the largest voluntary purchaser of Wind in OR
- #1 on EPA Green Power Partnership and Fortune 500 list. EPA Green Power Partner of the Year.
- Additional Misc sites being evaluated WW

Energy Conservation and Efficiency

- Since 2001, Intel has spent over \$24M on over 250 projects, saving over 500M-kWh
- \$7.2 M has additionally been funded in the last 9 months for conservation and retrofit projects
- Metering, Lighting, Boilers, Chillers, Air handlers, etc
- Fab and ATM Facilities Operations are implementing a Demand Side Utility Nmgt (DSUM) application to help:
 - Identify, Set Targets and track energy efficiency opportunities
 - Enable Benchmarking of facility systems World-wide
 - Measure, verify and ensure continued savings
 - Focus on Data Center efficiency opportunities

Solar Beginnings: 2008

- Installed Intel's first Solar Electric supply system on the roof of JF in Oregon
- Installed a solar supply beta in NM to test a Data Center application for supply
- Solar Hot water installation in India now supplies nearly 100% of 2 site's hot water
- More to come.....2009

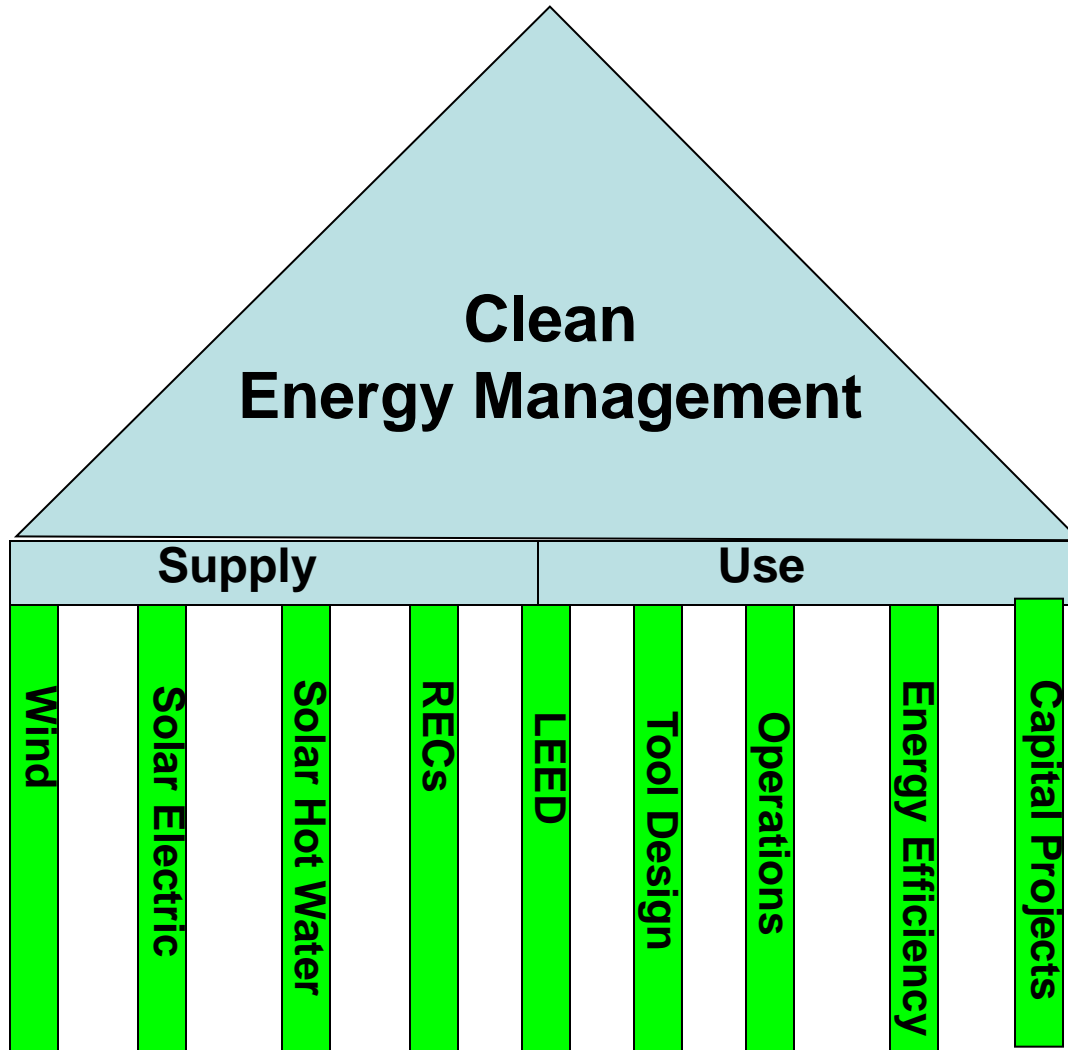
Multi-Pronged Energy Management Promotes Flexible Philosophy



**Source: EPCOR and Green-e.org. **Source: EPA Green Power Partnership and Fortune 500 list. EPA Green Power Partner of the Year.

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Flexible Philosophy Example



For Intel Purposes only

Intel's 2008-9 Renewable Energy

Actions

Intel receives **Green Power Leadership Award** from US EPA:



- Intel is the largest corporate purchaser of renewable energy in the U.S. and holds the #1 spot on their Green Power Partner list
- Nearly 50% of Intel's purchased electricity usage (1.3 B-kWh) will come from renewable sources such as wind and solar

Intel site solar installations begin and expand quickly:



- Bangalore, India - solar water heaters supply nearly 100% of the 2 sites Hot Water requirement saving 70,000 kilowatts/yr.
- Oregon, USA - a 100Kw electric PV system on the roof of Jones Farm campus Energized Q4 '08.
- New Mexico, USA - a solar demonstration project highlighting PV uses and benefits in data centers operational Dec 2008.
- Evaluations in process at 4 additional solar projects

****Intel is the largest voluntary Wind Energy Purchaser in Oregon**

What does 1,300,000,000 kWh equal?

- 185,000 passenger cars off the road/yr
- Over 1,600,00,000 automobile miles not driven
- 133,000 houses with clean renewable energy
- 114,000,000 gallons of gasoline
- 2,350,000 bbls of oil
- 42,100,000 propane cylinders for home BBQ
- 5,278 railcars of coal burned
- 479,000 metric tons of Coal
- 18,000,000 Trees seedlings grown for 10 yrs
- Over 2,000,000,000 lbs of CO2 offset each year
- Annual Generation from ~700 mW Solar plant

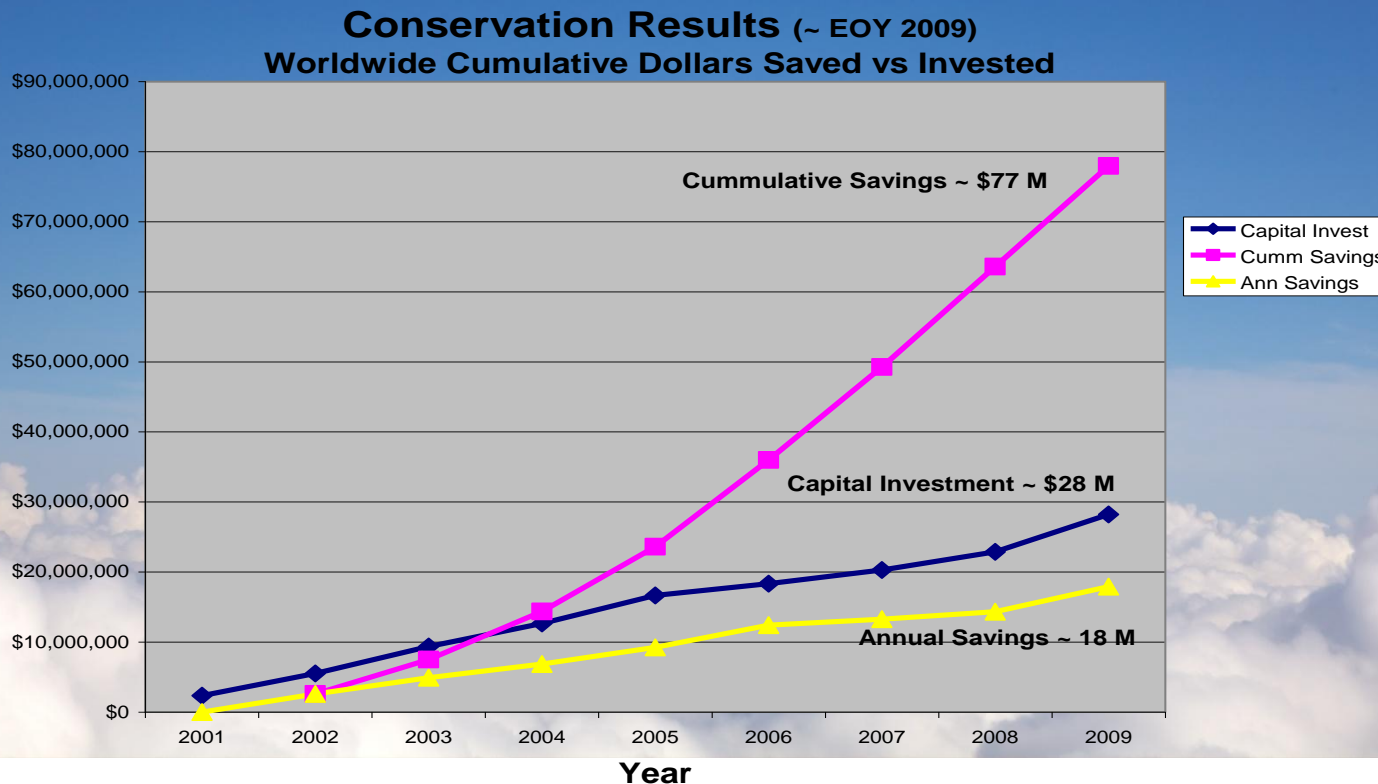
*** Estimates Based on EPA Calculations

Required for Intel (e.g.)

- #1 : Integrity, Crystal Clean, Honesty
- External Validation of Integrity
 - EPA Green Partner Program
 - Non-Profit Green-e certification
 - Attestations of each purchase
 - Highest quality/trusted supplier or marketer support
 - Approved mechanism for purchase
 - Positive history of mechanism, media and regulatory acceptance

Use Less – Greenest of them all

- Dedicated Conservation Capital Funding Program 2001+
 - ~\$28M invested, >\$77M saved
 - > 260 projects, >600M-kwh +NG saved
 - Conservation is “the gift that keeps on giving”
 - Conservation has the most impact at least cost of all green options



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[Purchasing Services](#)

Green Intel: Home

Wellspring with Will

- Wellspring?
- Apply for it!
- What is CSA?
- Recognizing Excellence
- IT Sustainability

Did You Know...

- The Green Intel Community is the largest group at Intel Blue with 1000+ members and

Recent News

- Intel employee named one of America's Smartest People's Top 100 Leaders. Find out why.
- Intel named Top Green Power Purchaser for the 2nd year in a row by the U.S. EPA. Read more.
- Intel's Eco-20 is highlighted by Environmental Defense Fund. See the article.

Go Green with Green Intel!

Find out what you can do to protect our planet, secure our work environment and reduce costs.

Sustainable Secure Savings

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FARM FRESH TO YOU

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Creating Your Commute

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BIKE TO WORK DAY 2009

Green Intel Links

Circle Links

- Home
- Library
- Ask
- Share
- Eco 20
- Directory
- Resources
- CS Green Team
- Sustainability in Action Program

Community@Intel Links

- Green Intel Group
- Ask A Green Question
- Share A Green Idea

LEARN
Your one-stop shop for information about Intel's environmental initiatives and performance, including our 2008 Eco 20 and 2012 Environmental Goals. [Learn More.](#)

ACT
Want to know what you can do today to help Intel reduce our environmental impact? There are many ways we can all take action on the environment -- from simple decisions to project leadership. [See the opportunities.](#)

SHARE
The best green ideas may just come from the person sitting in the cubicle next to you, across the world, or from you. Read about Intel employees who are taking steps for the environment. [Contact us!](#) [Have an idea.](#)

Larry Stone
Sunnyvale, California

Photo taken by:
Chris A. Johnson
Global Computing Group (GCG)

What do you think of Green Intel? Post your comments [here](#).

Feedback

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Solar Kiosk in Lobby



Electric Vehicle Charging Station in Oregon





When are you Done?
When is good, good enough?
When have you hit your Limits?

Limits like fears, are often just an illusion