

SOLAR POWER ON CONTAMINATED LAND

Brightfields Development LLC
Dartmouth Public Works Board
June 24th 2010



Brownfields to Brightfields: Community Benefits

- ▣ Puts unused land to sustainable use
- ▣ Meet community demand for green power
- ▣ Reduce greenhouse gases
- ▣ Reduce dependency on foreign oil imports
- ▣ Create jobs under both Federal and state programs
- ▣ Reduce maintenance costs



Challenges for Solar Farm Development

- ▣ Financing markets are variable and hard to manage
- ▣ Damage or destroy the existing landfill
- ▣ Navigate the complex utility interconnect process
- ▣ Work with regulatory review
 - MA DEP
 - MA DOER
 - MA DPU



Brightfields Development LLC

- ▣ Developing utility scale solar power on municipal and private landfills and vacant land
- ▣ Three sites currently under development for 32 MW in three states
- ▣ Leveraging the experience of the principals in both the energy and environmental fields
- ▣ Renova, the parent company, actively manages multiple landfills nationwide and has ongoing environmental remediation projects with both EPA and state regulators.



Brightfields Development LLC

- ▣ **John B. Hanselman** – Mr. Hanselman is a Managing Principal of Renova. Mr. Hanselman has spent the last 28 years in real estate and entrepreneurial companies in the senior executive and CEO roles. Mr. Hanselman has completed three successful start-ups in real estate and technology, with over \$2 billion in transactions.
- ▣ **Ronald Kelly** – Mr. Kelly is a Registered Professional Engineer and MBA with 15 years experience as an independent power producer. Mr. Kelly also had 15 years with Thermo Ecotek as it built up one of the largest biomass portfolios in the US. Prior to working in the energy industry Mr. Kelly was a Lieutenant JG in the US Naval Reserves with active duty in the US Merchant Marines.
- ▣ **Pete Pedersen, Esq.** – Mr. Pedersen is a Managing Principal and founder of Renova. Mr. Pedersen has over 25 years experience in law, corporate finance, and business with special expertise in corporate control transactions within the energy and environmental industry and transactions involving environmentally impaired properties.



Who is Renova?

- Real estate firm specializing in the redevelopment of environmentally contaminated land
- Headquartered in Wellesley, Massachusetts
- National \$300mm JV with Prudential Real Estate
- In-house team of developers, engineers, lawyers, investment bankers and insurance executives
- Principals have completed over 45 redevelopment projects having industrial, commercial and residential end uses



RENOVA



Environmental: An Experienced Team

Renova has demolished over 3,000,000 square feet of buildings and removed and recycled over 1,000,000 cubic yards of hazardous materials

- **Johns Manville Asbestos Shingle Factory** - Pittsburg, CA – 26 acre plant demolition program along with the excavation and removal of over 100,000 cy of asbestos impacted soil. Site was remediated for residential reuse. 3 active landfills on-site.
- **Chevron Marine Oil Terminal** - San Diego, CA. – Excavated 120,000 tons of petroleum-impacted soil from downtown San Diego. Project completed in seven weeks.
- **Glatfelter Paper Mill** — Brevard, NC - This \$50 million remediation of a two million square foot mill will convert a 550 acre site into a mixed-use development with residential, retail, resort and recreational components.



Solar Market Incentives

- ▣ Federal DOE 30% Investment Tax Credit (ITC) for renewable energy has been extended until 2016
- ▣ Federal loan guarantee program
- ▣ Massachusetts Renewable Portfolio standard of 15% by 2020
- ▣ Massachusetts Solar Carve Out
 - 400 MW of solar power by 2020
 - Solar REC auction: \$.30/kWhr min. for up to 10 years

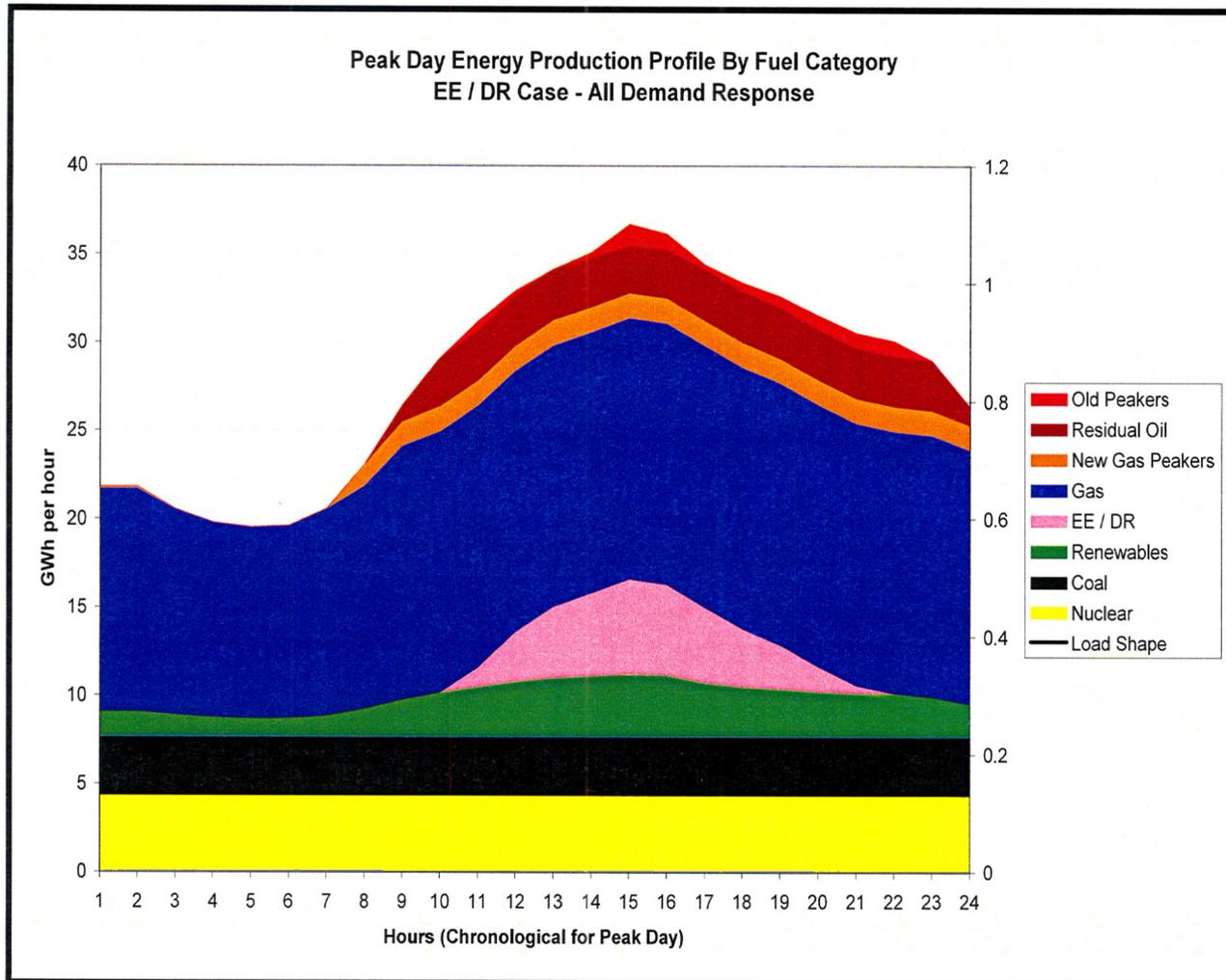


Solar Power has a Peaker Profile

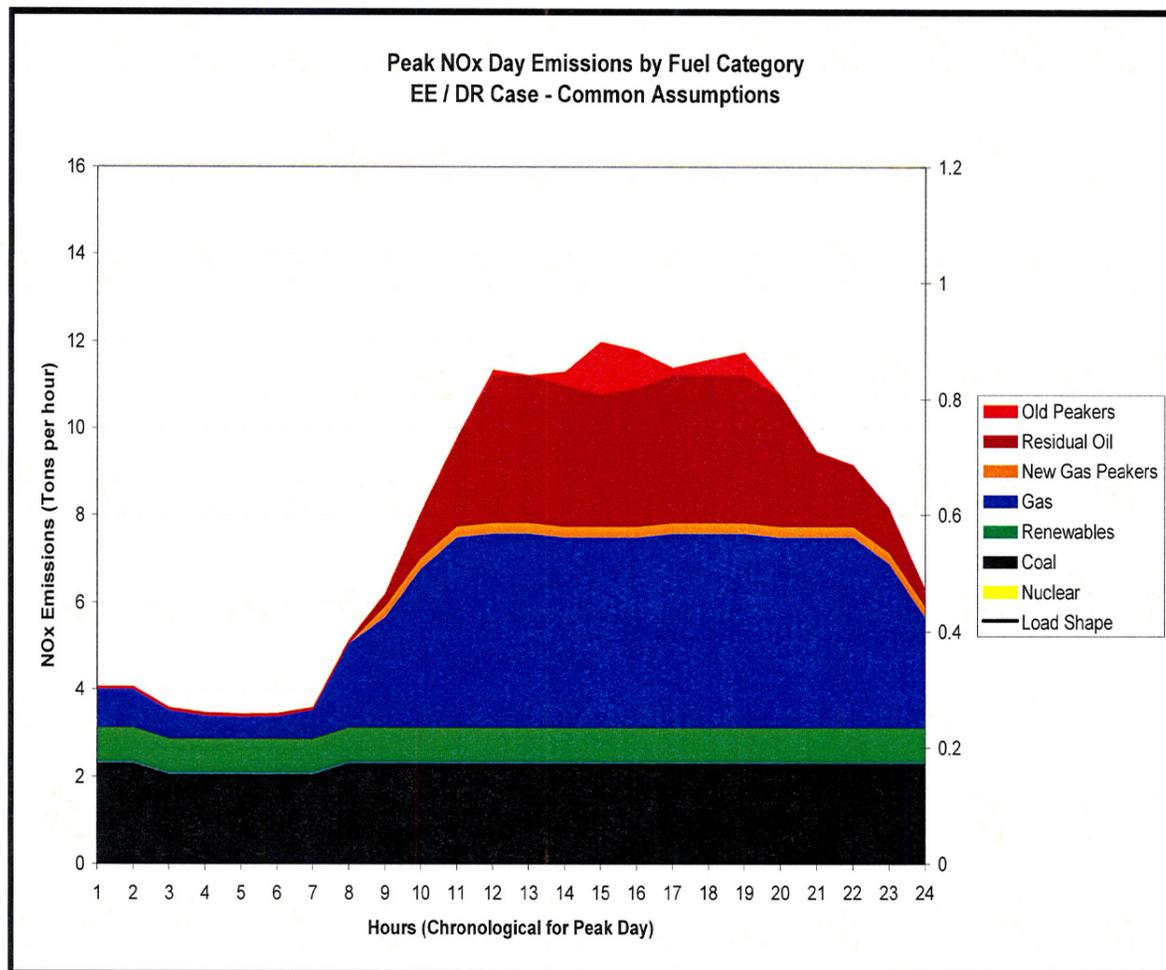
- ▣ Many states such as California recognize peak power value by offering a peak price premium.
- ▣ Peaking power is both expensive and highly polluting.
- ▣ Solar Power generation coincides with peak power demand.



Typical Regional Load Stack



Typical Regional NOx Pollution Load Stack



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Summary

- Brightfields Development LLC combines decades of property redevelopment and energy project experience. Brightfields has a competitive edge over others in the solar market because of the experience of its principals, who have redeveloped contaminated sites nationwide for a range of uses, most recently as Renova Partners LLC. Brightfields currently owns and operates or maintains seven landfills across the nation.
- Brightfields also has a very experienced team of power professionals that have successfully developed power projects of several types over many decades. Brightfields personnel have completed the development of coal and oil-fired power generation projects, gas-fired cogeneration projects, combined cycle projects and fluidized bed- biomass projects. The Brightfields team has negotiated several PPAs and interconnection agreements with utilities and completed the regulatory process for developing power projects in New England and throughout the United States.

