

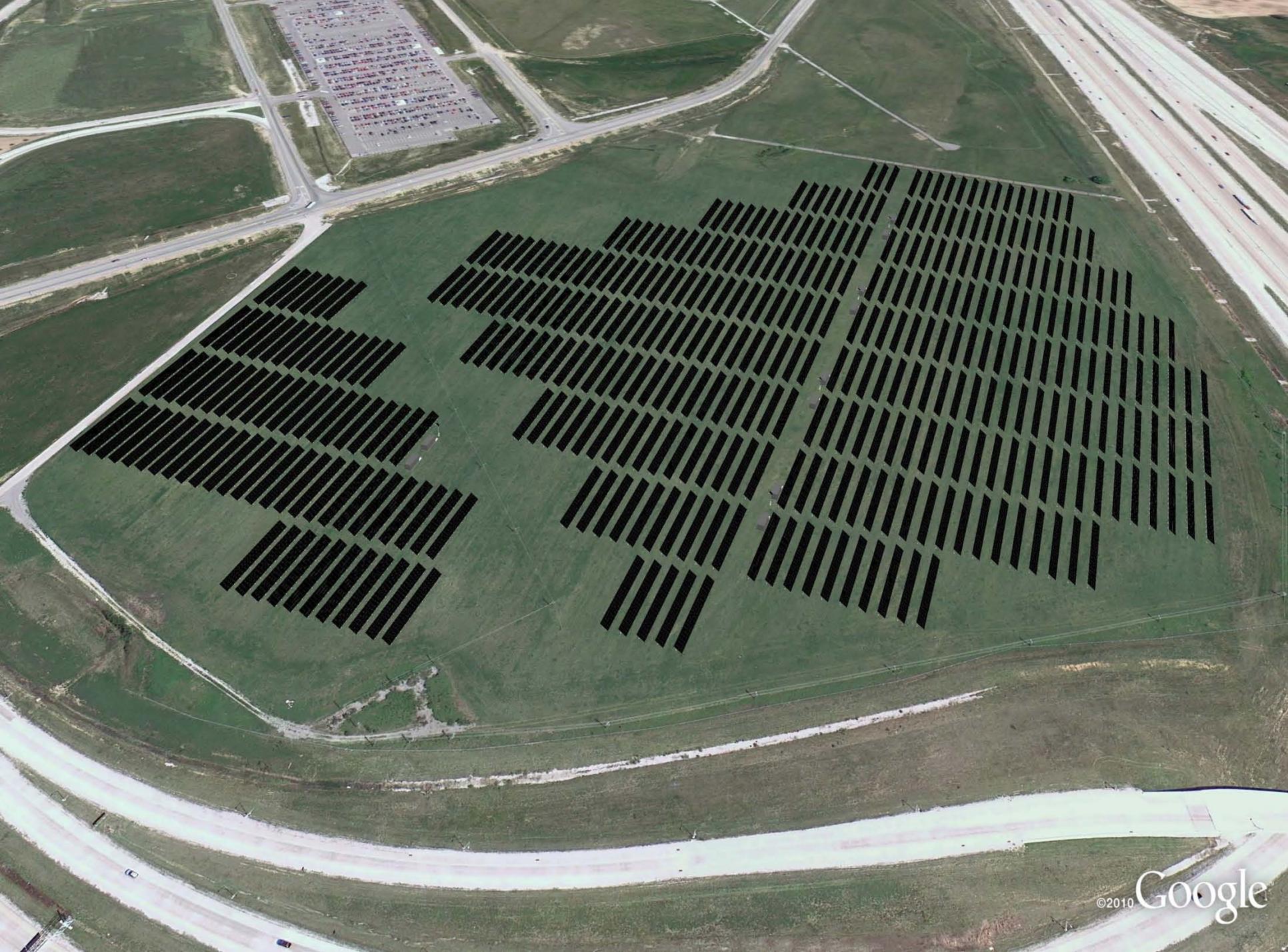
Regulation: Through the Eyes of the Solar Developer

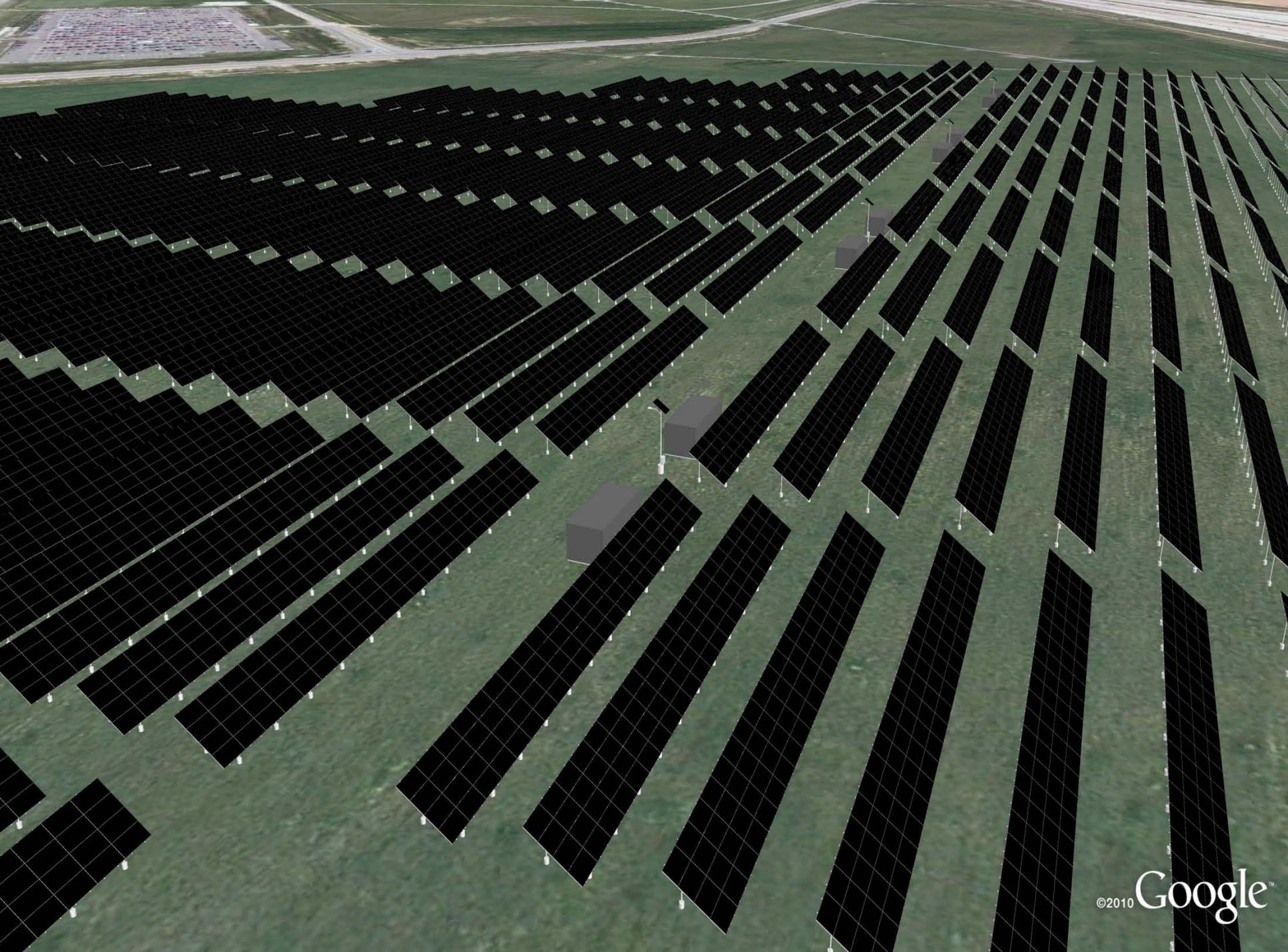


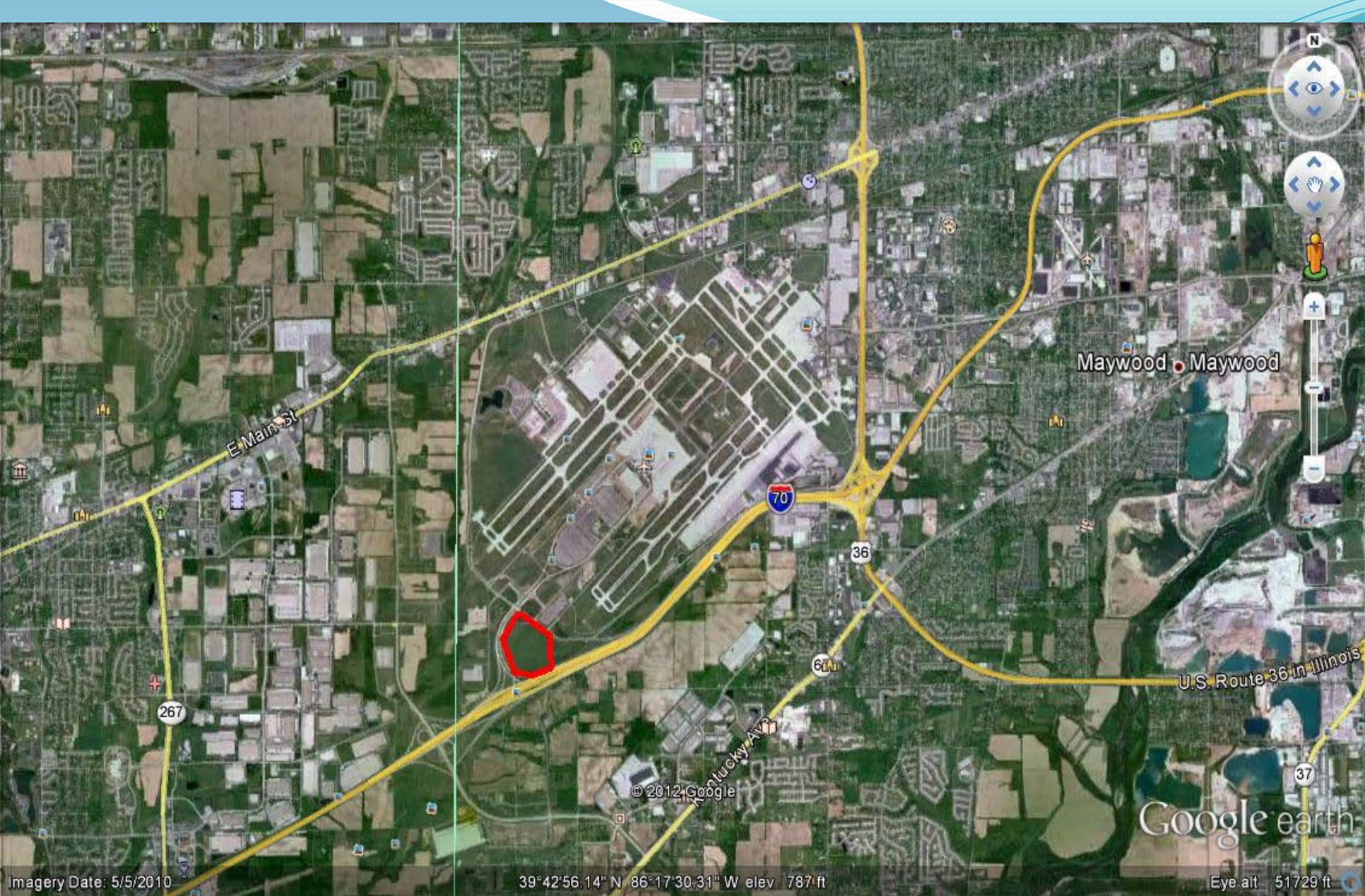
www.johnsonmelloh.com

Johnson Melloh Solutions...

- Energy services provider spun out of a 37-year old, family run mechanical contracting firm located on the west side of Indianapolis
 - Renewable energy component of our business began about 4 years ago (driven by our existing client base)
- Focus is on large-scale distributed solar energy development as the best avenue for offsetting load
- Market forces have led us to develop larger-scale projects in an effort to lower component costs
- Taking our company to the far reaches of the country and beyond







Imagery Date: 5/5/2010

39°42'56.14" N 86°17'30.31" W elev 787 ft

Eye alt 51729 ft

Two avenues for solar power...

- Distributed power
 - Used to offset load
 - Hedge against rising electricity prices
 - Fed to distribution lines
- Utility-scale development
 - Used to offset peak demand
 - Hedge against rising peak wholesale prices
 - Fed to transmission lines

*** Each have a distinctly different regulatory environment

Briefly on the Solar Development Process

1. Determine the customer (power consumer vs. utility)
2. Build the financial and social case to make the sale
 - Price of power now and into the future
 - Incentives
 - Societal benefit
 - Includes cursory design
3. Evaluate technical feasibility and design system
4. Secure PPA, Land, Permits, and Financing
5. Procure equipment and begin construction
6. Commission system
7. Operate and Maintain
8. Decommission system

Impact of regulation on the process

1. Determine the customer (power consumer vs. utility)
 - Largely dictated by price of power
 - Are third party PPAs an opportunity? Is there a competitive environment?
 - Is there demand for the clean power (RPS; Rate Tariff; High Power Prices)?
 - Is net metering an option?

Regulatory Impact (cont.)...

1. Determine the customer (power consumer vs. utility)
2. Build the financial and social case to make the sale
 - Price of power now and into the future
 - Incentives
 - Societal benefit
 - Includes cursory design

-Again, price of power will be used to build the pro forma, but now we must trend line that value into the future. Regulatory policy must be clear.

Regulatory Impact (cont.)

1. Determine the customer (power consumer vs. utility)
2. Build the financial and social case to make the sale
3. Evaluate technical feasibility and design system
 - Certain states have detailed technical policies for interconnection and limitations to that effect
4. Secure PPA, Land, Permits, and Financing
 - All PPAs have a state-based review process when dealing with a regulated utility. The PPA and the land lease must be clear and stable for institutional investors to feel that the project is worthy.

Regulatory Impact (cont.)

1. Determine the customer (power consumer vs. utility)
2. Build the financial and social case to make the sale
3. Evaluate technical feasibility and design system
4. Secure PPA, Land, Permits, and Financing
5. Procure equipment and begin construction
6. Commission system
7. Operate and Maintain
 - Is the farm considered a power plant and thus regulated as a utility? Leads to ongoing reporting requirements.
8. Decommission system
 - May be required and outlined before PPA approval.

The Landscape is Varied...

- Every state has their own unique mix that must be determined before starting the development process
- Database of State Incentives for Renewable Energy is great at highlighting the big picture items
 - State PUCs can play a huge role by having a functional website that clearly defines their policies when it comes to renewable energy

Definition of Good Regulatory Policy

- Functional
 - Streamlined (not the rule itself, but the process by which to comply)
- Clear
 - Both the rules and time horizons
- Not overtly burdensome financially
- Limits overlap with federal regulation
- Allows for competition
 - Accomplished through third-party PPAs, decoupling, aggressive net metering, RPS, etc...
- Inclusion of non-traditional power providers in the conversation

Thank you!

Travis Murphy

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