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#### **#4 Big Idea...Landfill Power Generation: Making Public Policy Work with Enterprise**

##### **When you turn on the lights think about where the power comes from...**

Murray City Power and the community leaders had the fortitude to take on a new idea.

Murray City with a population of almost 50,000 in central Salt Lake Valley has always been a fairly independent city since its early days 100+ years ago as an industrial town supporting the Utah mines. The City is well passed the old industry but the legacy for independence continues. The City runs its own school district, power, water, fire, police and park resources. Murray City is a progressive community when it comes to resource planning, and its latest Big Idea.

*A convergence of ideas* resulted in Utah's 1<sup>st</sup> power generation project from renewable, sustainable energy. In this case the Big Idea converts the methane gas that emanates from the Salt Lake County garbage dump to power turbines to generate electricity that is then transmitted over the state's electrical grid to customer Murray City Power.

Murray City will now obtain 8-10% of its power needs from this one low cost source or the equivalent of 2,500 homes or enough energy to power Murray's government and all its street lights. Plans are to tap another landfill in Utah for a similar conversion that will add capacity. The main advantages of this enterprise are:

- Cost effective alternative to volatile oil and natural gas supplies;
- By utilizing the bio-mass methane generated from the landfill the project eliminates noxious gases from the atmosphere and converts gas to clean power;
- Landfill is a renewable, sustainable resource. Proven technology is available and power conversion is economical.

##### **So how did this project get launched and why is it the only one in Utah...**

By the time this power was on line on July 24, 2006; it took more than 8 years of approvals. Until recently fossil fuels such as natural gas, oil, and coal were so plentiful, and cheap few people wanted to bother with alternative energy ideas. Although, there are about 400 locations around the U.S. similar to the Murray project, alternative or "green" energy is thought to be expensive, "too green" thinking; requiring large capital investments with long economic returns. Think solar panels on the rooftop and you realize how expensive and uneconomical some ideas are; you need to be a real environmentalist to pursue alternative energy ideas, BUT not all are impractical.

In the case of the Murray City project, there was very little customer up charge. The idea was grounded in reality and pragmatic planning and thinking. What was needed for people to come together was to share a common vision.

Back to the *convergence of ideas* notion, there were several people in and out of the state involved in both the public and private sectors that understood the possibilities of converting landfill waste to energy. Salt Lake City and county officials, private power companies, and Murray City Power General Manager, Gary O. Merrill, were working independently on ideas. Through Utah State power associations the various parties came to together to share a vision of what was possible. The State of Utah, Salt Lake County and Salt Lake City, and private industry had the landfill and the partners but no customer until Murray City raised its hand that it was willing to work on the project; the only Utah municipality that did so.

As with any Big Idea the balance between Vision & Pragmatism; Leadership and Teamwork were significant to the launching of Murray Power on a renewable energy path. As in the private sector public policy planners need to approach these principles in the same way. However, a key difference is that in the public sector elected and appointed public officials have voting and sometimes very fickle constituents, and risk taking on capital projects with long term outcomes is not often a priority for public policy leaders. With each new election and possible change of administrations there are new agendas; consequently, long term planning for power projects often don't survive new administrations.

A look in this case at the different participant stakeholders indicates great commitment on the part of Murray City's core people, Gary O. Merrill, the Mayor's Office, Murray's Power Advisory Board, and ultimately the City Council who Gary spent a lot of time learning how best to educate non-engineers and the general voting public on how to communicate the benefits of this project. But it started with a vision that was delivered with vigor, commitment, perseverance, passion, and yes... energy... by the project's proponents.

**Vision:**

- Use sustainable, alternative energy sources and commit to long term development;
- Understand the environmental and economic benefits of renewable energy;
- Understand the potential of Biomass- Landfill;
- Set course for public energy policy discussion for greater energy independence from fossil fuels

**Pragmatic:**

- Economic- reasonably cost effective
- Power to community- scaleable
- Technical ability
- Logistics
- Environmental- reuse materials of SL county landfill

**Leadership:**

- State, county, local government
- Technical teams, contractors
- Sharing a vision and creating education about the possibility

**Teamwork:**

- Guiding competent, capable experts to speak with elected officials and concerned citizens over 8 yr period from concept to power online July 24 '06 with energy to supply 2500 homes in Murray City or about 8% of Murray City power needs.

**Big Idea**

Taking smelly, gassy, ugly garbage from landfill and creating clean electricity...enough to power city offices and street lights or thousands of homes.

**Pros**

- Harnesses people, creativity, and ideas to solve problem
- See the long term benefits of a solution and stick with it...
- Overcome conventional thinking on national energy policy that relies on coal and oil (dirty, expensive and volatile source)
- Contributes to offsetting some costs of rising oil and natural gas prices
- Creates a blueprint for state and possible nationwide energy policy for good mix of public policy incentives with private enterprise to create beneficial environ-economic models

- Presents Murray City as a progressive, innovative community with an attractive infrastructure and facilities.

**Cons**

- 8 years to complete a project is a long time by most standards, particularly in using available technology. Perhaps with credibility gained in this effort future projects can be accelerated.
- This is a small amount of energy contribution, but a great start if the City can add other resources to the municipality's energy grid.

**Opportunities**

Murray City and Murray City Power through community outreach should regularly communicate with Murray Citizens and the State of Utah the types of progressive, independent ideas in development for a sustainable energy policy.

Murray has a wonderful idea under discussion for development of energy education programs and seminars for children and adults that will help inform citizens. This will provide people with more appreciation for the energy we use and its origins, and cultivate greater acceptance of new ideas in the future.