Alternative Energy for Rosemount

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What is Alternative Energy?

Definition (Oxford): Energy generated in ways that do not deplete natural resources or harm the environment, especially by avoiding the use of fossil fuels and nuclear power.
LED Street Lights

Advantages:
- Efficient
- Longevity
- Durability
- Safety
- Environment friendly

A Bright Idea: New LED streetlights in Crookston, Minnesota

Submitted by Jenna Lewein on Tue, 07/09/2013 - 10:05am
Region: Northwest
Efficient City Fleets

• Available
• Dependable
• Cost effective
• Energy efficient
• Safe to operate
Solar Transpired Air Heat

Advantages:
• Recycling of air
• Energy Efficient
• Cost Saving
• Longevity
• Low maintenance
• Fast Return on Investment
Solar Photovoltaic
Rosemount Solar Potential Map
<table>
<thead>
<tr>
<th>Building Description</th>
<th>Total panels</th>
<th>Estimated annual kWh production</th>
<th>2014 kWh consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Center / Armory</td>
<td>2180</td>
<td>730,000</td>
<td>2,600,000</td>
</tr>
<tr>
<td>Rosemount City Hall</td>
<td>111</td>
<td>40,000</td>
<td>380,000</td>
</tr>
<tr>
<td>Fire Station II</td>
<td>197</td>
<td>70,000</td>
<td>110,000</td>
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<tr>
<td>Fire Station I</td>
<td>299</td>
<td>100,000</td>
<td>80,000</td>
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<tr>
<td>Steeple Center</td>
<td>275</td>
<td>90,000</td>
<td>40,000</td>
</tr>
</tbody>
</table>
Solar PV Financing

Solar*Rewards
8¢/kWh
20 kW max

Made-in-MN
15¢/kWh
40 kW max
Geothermal

● Successful implementation in several local cities, e.g. Eagan
  ○ Ice Arena(s) converted to a ground source heat pump system

● Resource: GESP, Guaranteed Energy Savings Program
Wind

- highly visible
- varied models
  - a single 160kW turbine can supply power for about 100 homes
- development potential
Recommendations

LED lights
GESP
- Energy Efficiency Projects
- Solar Assessment
Use local resources
- CERTs
- Other Cities