Why Energy?

- New Attention
- Cost!
- Highest Electricity Rates in the Midwest
- New Technology
Energy

➢ Energy and Agriculture
➢ Saving Energy, Saving Money
➢ Renewable Generation – “The Next Frontier”
➢ Opportunities
## Energy - Production

<table>
<thead>
<tr>
<th>Crop</th>
<th>Acres</th>
<th>Yield&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Production&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corn</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>1,730,000</td>
<td>81</td>
<td>140,130,000</td>
</tr>
<tr>
<td>2025</td>
<td>2,662,000</td>
<td>250</td>
<td>666,500,000</td>
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<tr>
<td><strong>Soybeans</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>515,000</td>
<td>26</td>
<td>13,390,000</td>
</tr>
<tr>
<td>2025</td>
<td>2,282,500</td>
<td>65</td>
<td>148,362,500</td>
</tr>
<tr>
<td><strong>Wheat</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1970</td>
<td>495,000</td>
<td>39</td>
<td>19,305,000</td>
</tr>
<tr>
<td>2025</td>
<td>555,500</td>
<td>110</td>
<td>61,105,000</td>
</tr>
<tr>
<td><strong>Total Bushels</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>2,740,000</td>
<td></td>
<td>172,825,000</td>
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<tr>
<td>2025</td>
<td>5,500,000</td>
<td></td>
<td>874,967,500</td>
</tr>
</tbody>
</table>

<sup>1</sup> bushels/acre  
<sup>2</sup> bushels
Energy is Critical!

- Facilities
- Drying Grain
- Processing
- Storage
Energy Needs in Agriculture

Energy

- Affordable
- Reliable
- Predictable
Energy Efficiency

Lower Costs, More Reliable

- Slow-Start Motors
- Variable Speed Drives
- HVAC
- Lighting
Energy Efficiency

- **Energy audits** – a key first step often provided for free or reduced cost through utilities.
  - Helps determine useful technology
  - Significant savings for major users
Renewable Energy

- Consider long-term opportunity
- **Cost** will continue to fall
- **Storage needs** are rapidly advancing
- Agriculture has opportunities for **partnership**
Renewable Energy

- **Rural Energy for America Program (REAP)** – funding for on-farm renewable energy generation, or energy efficient technology.
  - Loans
  - Grants
Renewable Energy: Solar

Installation costs continue falling…

![Graph showing the reduction in median installed price of solar installations over time.](chart.png)
Renewable Energy: Wind
Opportunity: Sustainability Footprint

- On-Farm Clean Energy
  - Renewables
  - Efficiency/Savings

Corporate Sustainability Requirements

➢ **Renewable Energy** is one way to meet corporate sustainability requirements.
Opportunity: Engaging with Utilities

Utilities may not know what you need!
Utilities may not know what you want!
Considerations for Today

- **Efficiency**: Step One!

- **Renewable Energy**: “Where the puck is going.”

- **Partnership with Government, Utilities**
Thank You!

“STRIVE TO BE WHERE THE PUCK IS GOING TO BE, NOT WHERE IT HAS BEEN!”

Wayne Gretzky

Michigan Agri-Business Association
www.miagbiz.org