

**Michiana Area Council of Governments
Partners for Clean Air Luncheon
April 26, 2016**

**The University of Notre
Dame
Our Energy Future**

**Linda Kurtos
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The Catholic Mission



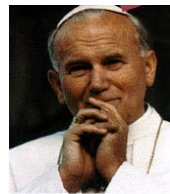
The Church's mission "means respecting each of God's creatures and respecting the environment in which we live."

Pope Francis , March 19, 2013

"... Yet no less troubling are the threats arising from the neglect – if not downright misuse – of the earth and the natural goods that God has given us. For this reason, it is imperative that mankind renew and strengthen "that covenant between human beings and the environment, which should mirror the creative love of God, from whom we come and towards whom we are journeying".



Pope Benedict XVI, January 1, 2010



"... World peace is threatened not only by the arms race, regional conflicts and continued injustices among peoples and nations, but also by a lack of due respect for nature, by the plundering of natural resources and by a progressive decline in the quality of life."

Pope John Paul II, January 1, 1990

CO₂ Emission Goals

2010 – Set CO₂ Emission Goals for Scope 1 & 2 Emissions

- **2030 - Reduce CO₂ emissions by 50% per gross square foot from 2005 levels**
- **2050 – Reduce CO₂ emissions by 83% per gross square foot from 2005 levels**

Campus Growth

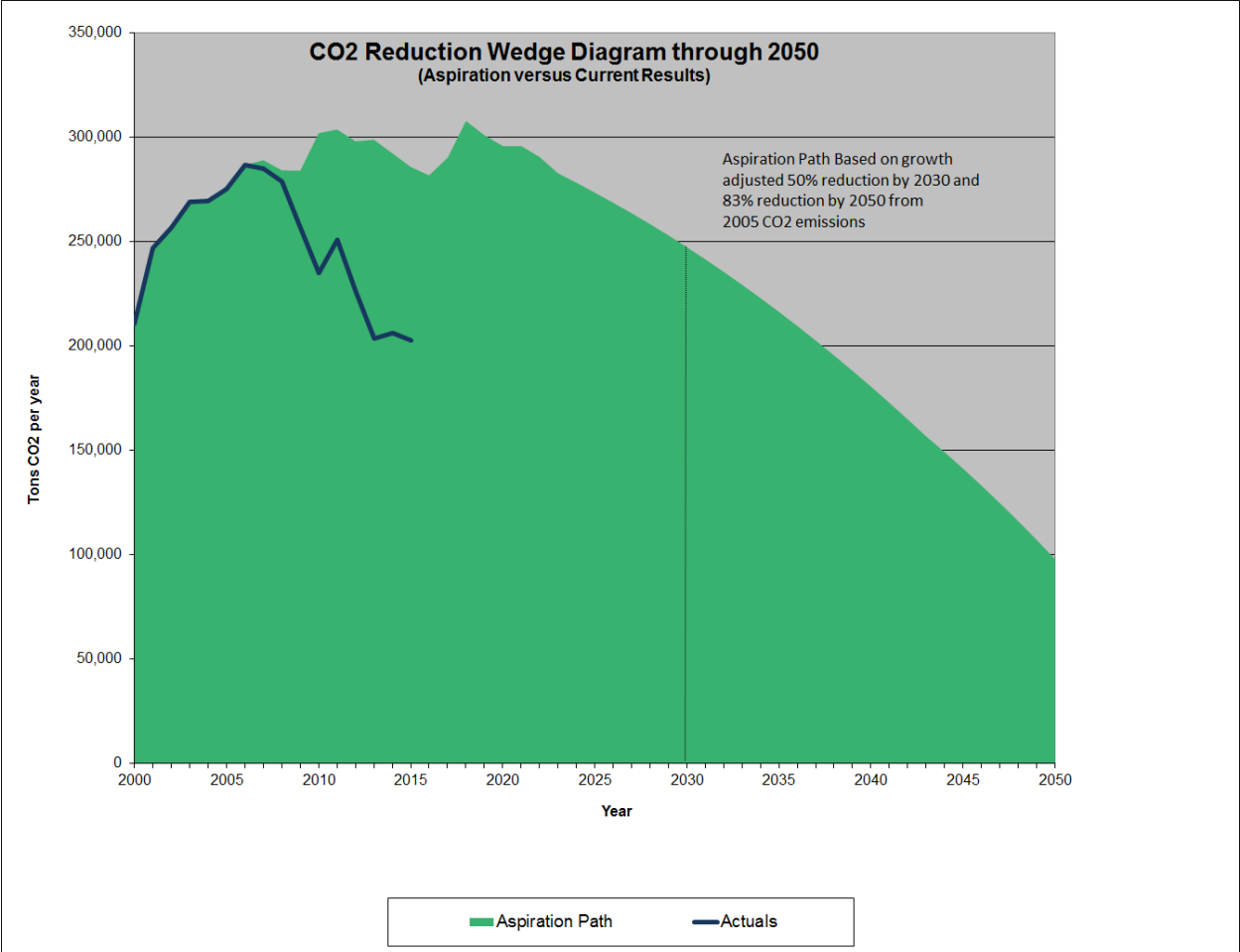
Late 1800s



2011



Emissions Status



Laudato si' Care for our Common Home



“The urgent challenge to protect our common home includes a concern to bring the whole human family together to seek a sustainable and integral development.”

Energy Future

- Use fewer carbon-intensive fuels
- Utilize robust energy conservation measures
- Integrate recoverable and renewable energy sources
- Create a diversified portfolio of energy sources
- Guarantee reliable energy for campus at all times

Eliminate Coal Use



Energy Conservation Measures



Completed 3 Phases

- Converted the Purcell Pavilion to LED lighting
- Converted the majority of outdoor lighting to LED
- Upgraded HVAC systems to be more efficient

Entering Phase 4

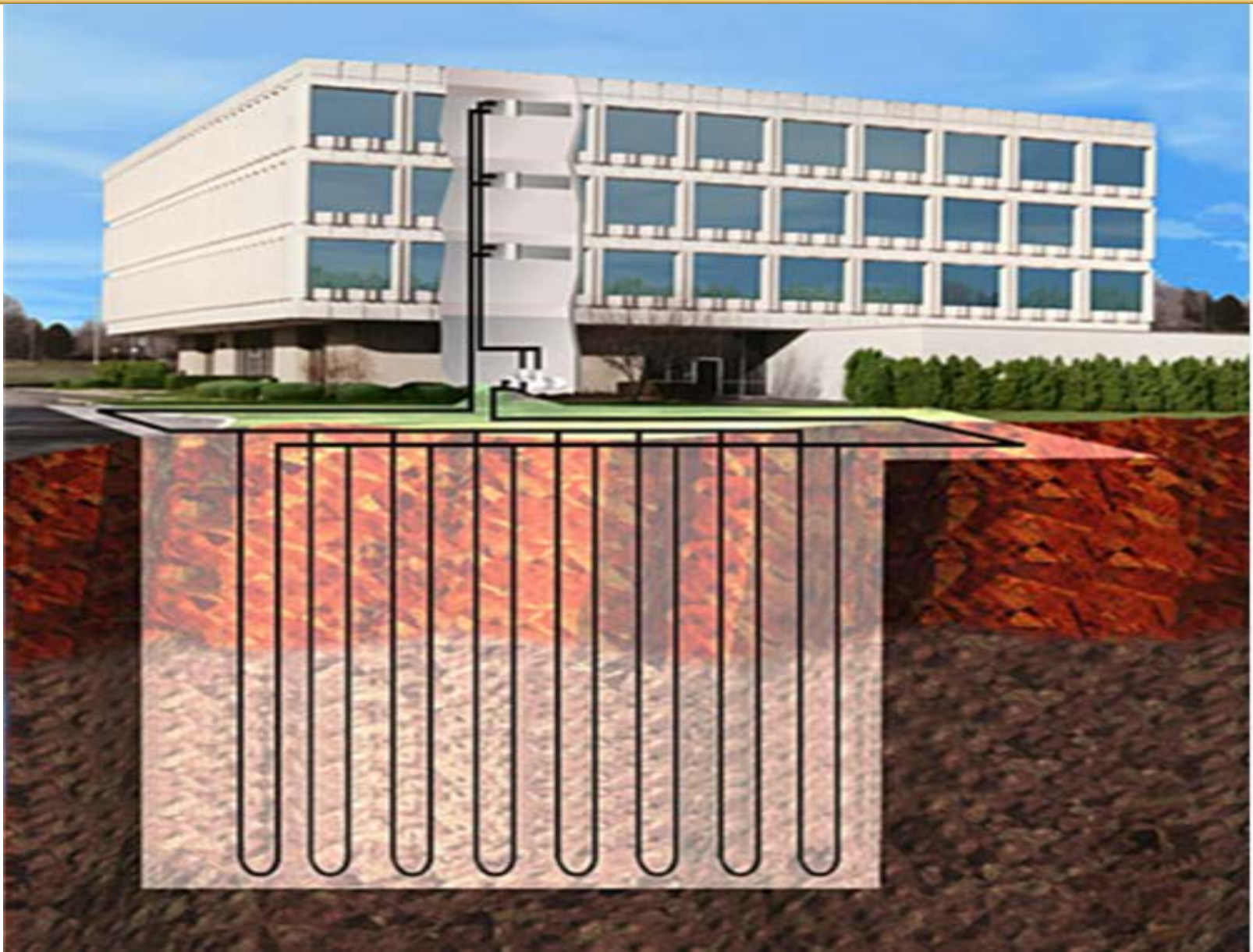
- Installing Variable Frequency Drives for more efficient fans
- Installing additional LED lighting upgrades
- Investigating small-scale solar options

Integration of Recoverable Energy



- Applying heat recovery chiller units at power plant and individual buildings
- Constructing a large scale regeneration heat recovery system

Geothermal Energy



Geothermal Energy

- Installing a 300-ton geothermal field in East Quad
- Preparing a 1,000-ton geothermal field beneath the stadium parking lot
- Preparing a 1,350-ton well field beneath Ricci Practice Fields.

When these are completed, they will result in an 8% reduction in CO₂ emissions from FY15.

Hydroelectric Energy



Solar PV



Expanding Our Infrastructure



Questions?



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