

ENERGY IN A CARBON CONSTRAINED WORLD

Innovating solutions to the world's most pressing energy challenges

 **6**
Colleges

 **28**
Schools

 **62**
University Patents FY17

 **>1,000**
Energy Researchers

 **~100**
Energy Related Labs

 **~\$100M**
Annual Energy Research
Portfolio



- Social-technical Analysis
- Energy Security
- National Security
- Energy Access

- Hardware Vulnerability
- Malware Decomposition
- Encryption
- Specialized Tools

- Internet of Things
- Equipment and Sensor Analytics
- Predictive Analytics
- Real Time Optimization

- Machine Learning
- Power Generation Application
- Advance Manufacturing
- System Informatics and Control



Nuclear



Energy
Efficiency



Carbon
Capture



Thermal



Social &
Environmental
Impact



Biofuels



Grid



Renewables

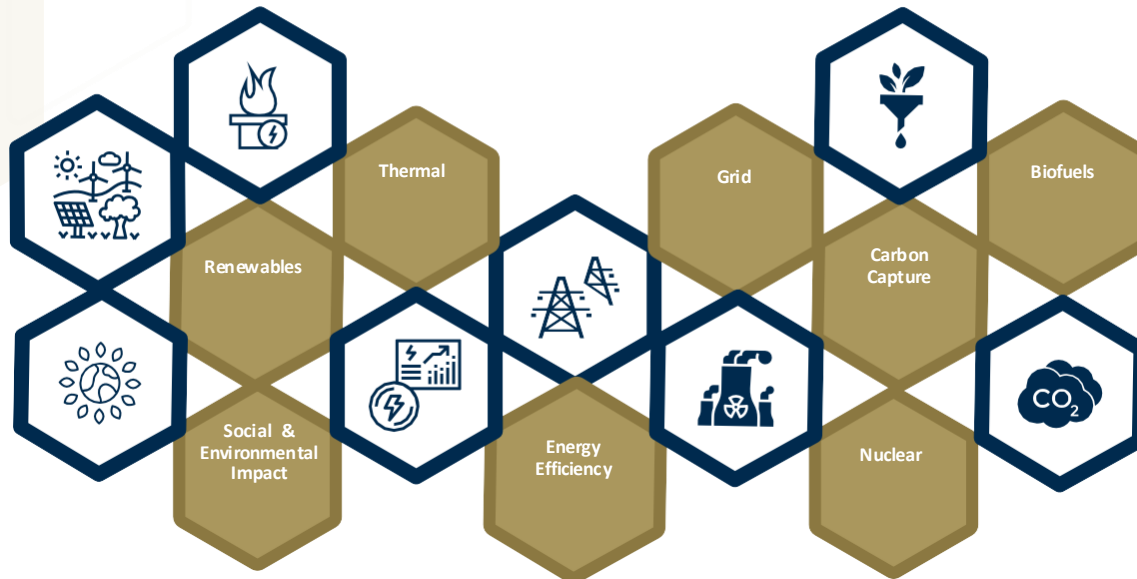
ENERGY IN A CARBON CONstrained WORLD

Innovating solutions to the world's most pressing energy challenges

 **6**
Colleges

 **28**
Schools

 **62**
University
Patents FY17



 **>1,000**
Energy Researchers

 **~100**
Energy Related Labs

 **~\$100M**
Annual Energy
Research Portfolio



Policy & Economics

- Social-technical Analysis
- Energy Security
- National Security
- Energy Access



Cybersecurity

- Hardware Vulnerability
- Malware Decomposition
- Encryption
- Specialized Tools



Analytics

- Internet of Things
- Equipment and Sensor Analytics
- Predictive Analytics
- Real Time Optimization



Systems Analysis

- Machine Learning
- Power Generation Application
- Advance Manufacturing
- System Informatics and Control