Creating an Energy Transition Plan for Michigan State University

Spring 2011

www.energytransition.msu.edu

Why do we need a transition plan?

- MSU is committed to a sustainable future
- MSU's power plant is expected to reach its capacity for steam and electricity in the next 10-15 years
- Energy costs are rising and air quality and emissions legislation is quickly progressing, constraining fuel choices

A transition to renewable technology

- Non-renewable energy sources will eventually run out or be too expensive to use

- Renewable energy sources are thought to be the long-term solution

- However, today's renewable energy technology is not sufficient to meet the needs of the university

Recent energy initiatives

- LEED based construction standards
- Fuel switching
- New HVAC practices and policies
- Retro commissioning teams
- More efficiently scheduling classes and events
- Sustainability Seed Grant

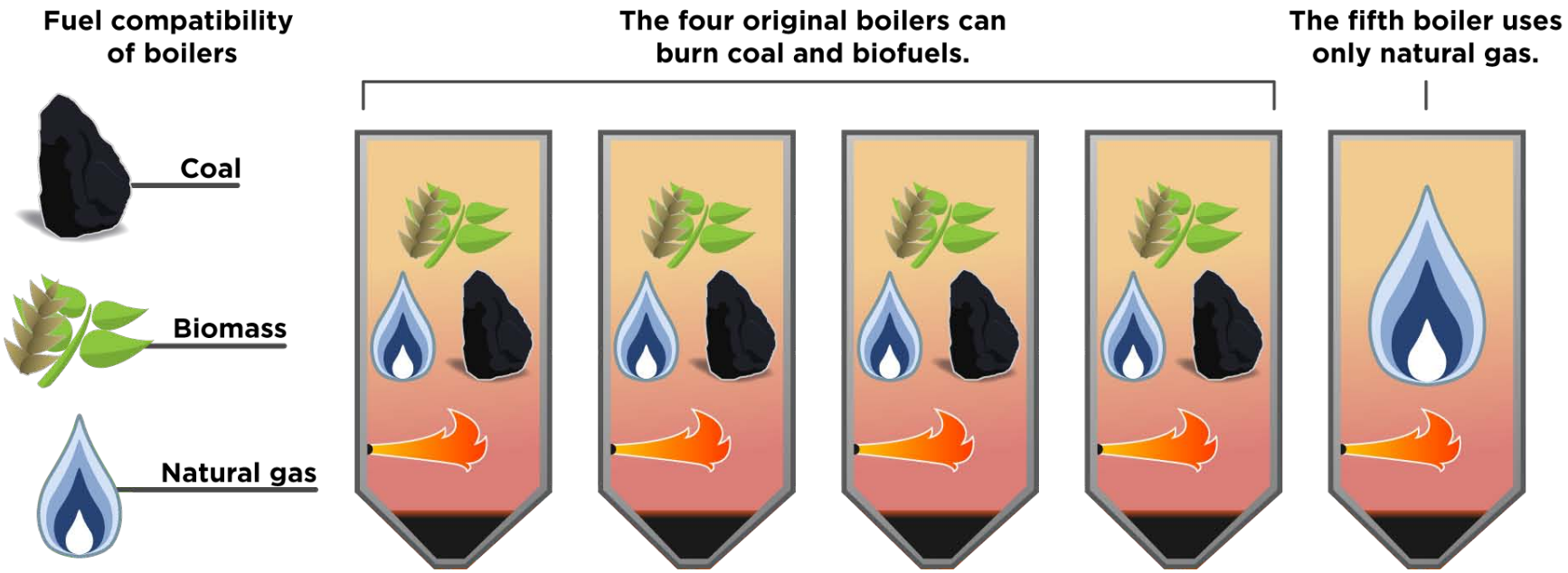
Collaborative research

- Energy Plug Load Study
- Community Preferences for Energy
- Community Decision Making
- Power Plant Decision Making
- Anaerobic Digester Study
- *Research briefs available at www.bespartangreen.msu.edu*

Power at MSU

- The T.B. Simon is a co-generation plant that produces steam and electricity
  - Heats and cools buildings
  - Generates electricity

What fuels can each boiler at the T.B. Simon Power Plant use?



Existing renewable energy projects

- Geothermal heating system at Life Sciences
- Solar panels at the Pavilion
- Solar panels at the MSU Surplus Store and Recycling Center
- Biomass used in the power plant

Preparing for an energy transition

- Assessment of current infrastructure
- Examine potential new technologies
- Consultant's report is available at www.energytransition.msu.edu

Energy transition process

- The Energy Transition Plan will focus on optimizing variables such as:
  - capacity
  - cost
  - reliability
  - environment
  - health

Steering committee

- Students, faculty, staff and administrators with multiple areas of expertise
- Develop goals and strategies for public feedback and external review

Steering committee faculty

- **Wolfgang Bauer**, Physics and Astronomy, Institute for Cyber-Enabled Research
- **Jennifer Carter-Johnson**, College of Law
- **Thomas Dietz**, Sociology and Environmental Science and Policy Program
- **Brian Jacobs**, Supply Chain Management
- **Satish Joshi**, Agricultural, Food and Resource Economics

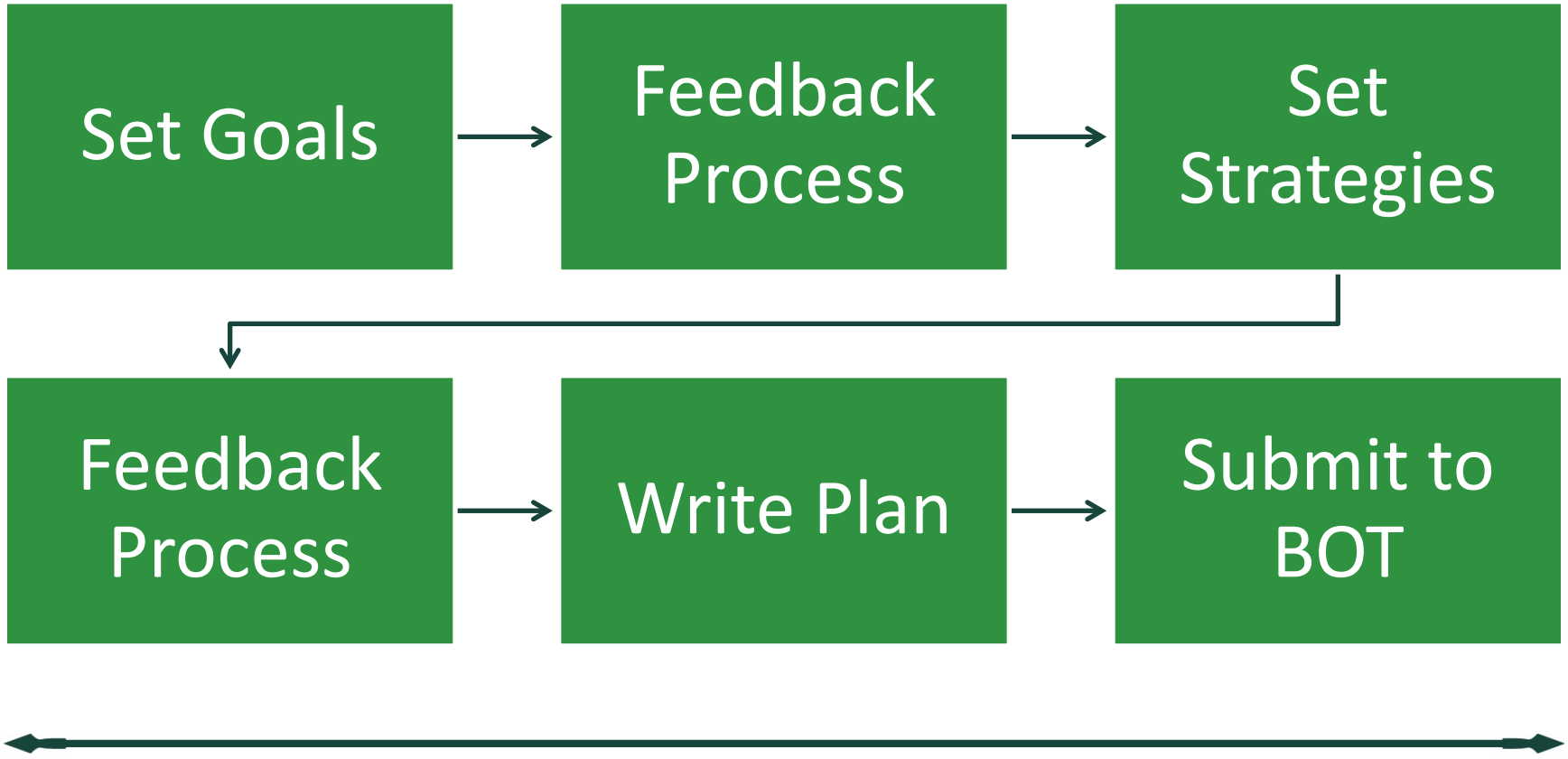
Steering committee faculty

- **Leo Kempel**, Electrical and Computer Engineering
- **Elizabeth Lawrence**, Human Medicine
- **Tim Mrozowski**, Planning, Design and Construction
- **Kenneth Rosenman**, Occupational and Environmental Medicine
- **David Skole**, Forestry

Public outreach and engagement

- Educate the campus on basic energy principles
- Inform community about the process and create opportunities for feedback and participation
  - Energytransition.msu.edu
  - Online feedback forms
  - Public forums
  - Social media polls
  - Key stakeholder presentations

Energy transition process



Timeline and outcomes

- The steering committee will submit the plan to the Board of Trustees in early winter 2012
- If adopted the plan will set standards and govern future energy decisions
- The document will be reviewed and updated every five years

Feedback

Please direct questions and comments to the feedback form on

energytransition.msu.edu