

Toyota Energy Team

E M O

Toyota's Partnership with Energy Star

NASEO Annual Meeting September 10, 2007

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Toyota Motor Engineering & Manufacturing North America, Inc.

Toyota's Background

- 1st North American Assembly Plant 1988
- North American Headquarters established 1996
- 8 Assembly Plants
- 3 Engine Plants, 4 Unit Plants (Casting, Wheels, etc.)
- Over 40,000 employees
- Production > 1.8 M vehicles/year



TOYOTA
Philosophy: Reduce Energy/CO2 Which
Contributes to the
Improvement of the
Earth's Environment

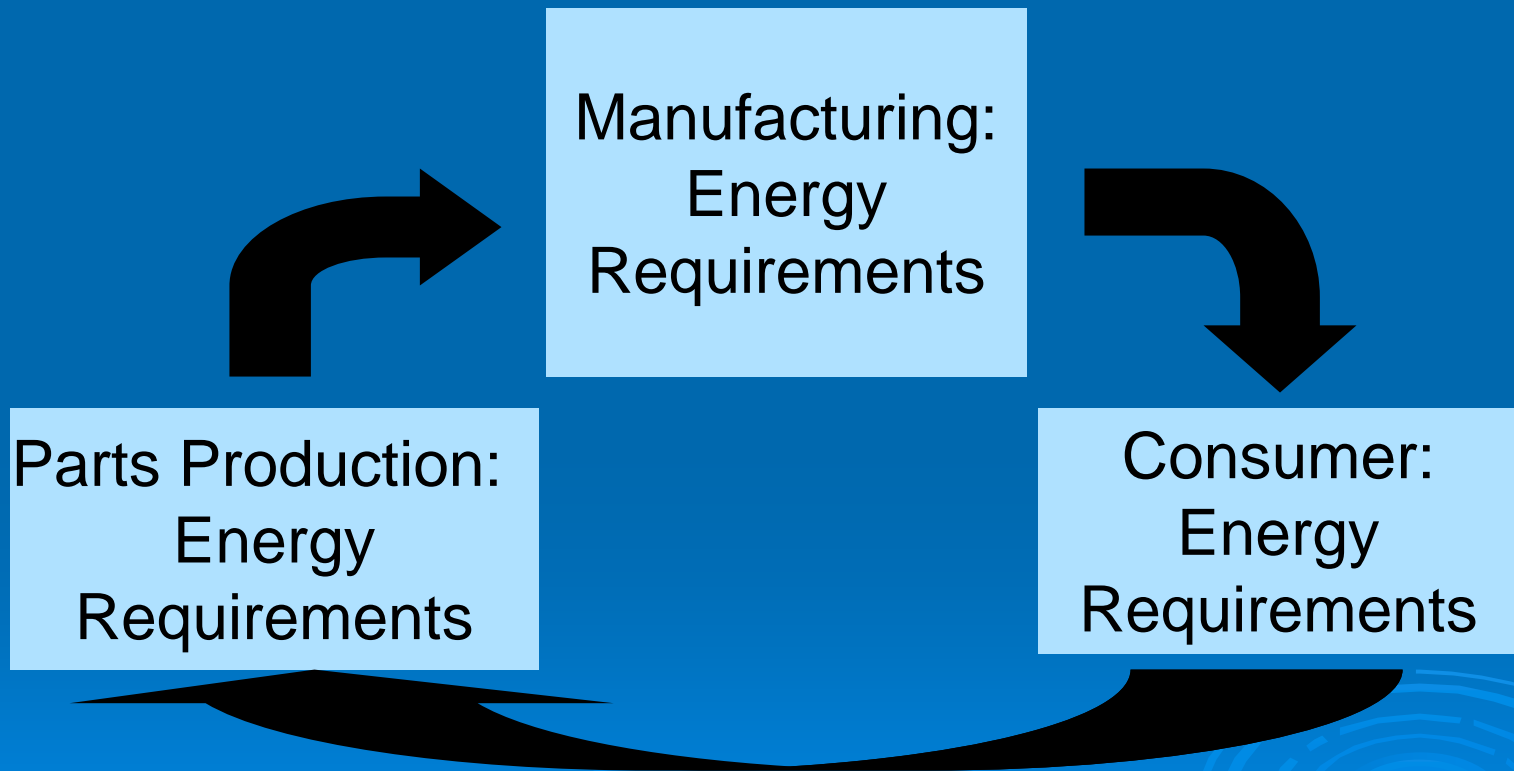


Manufacturing in North America



Energy Footprint

What is the Energy Life Cycle of our Product?



Reduce CO2 in all aspects of our Product

Green, Lean and Clean Towards the Ultimate ECO Factory



Ultimate
ECO
Factory



Aim:-
Zero
Emissions

New Plant Design Concept

Integrated Energy Policy

Integrated Equipment/
Building Design

On-Site Generation

Reclaim Waste Heat

Co-generation

CO₂ Capture/Store

Reduce
Operations Use

CO₂ Focus
KPI

Purchase
Contract

Sequestration

Energy ↑
Reduction

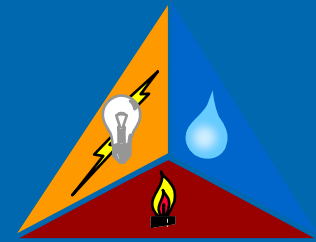
Energy ↑
Conversion

Alternative ↑
Energy

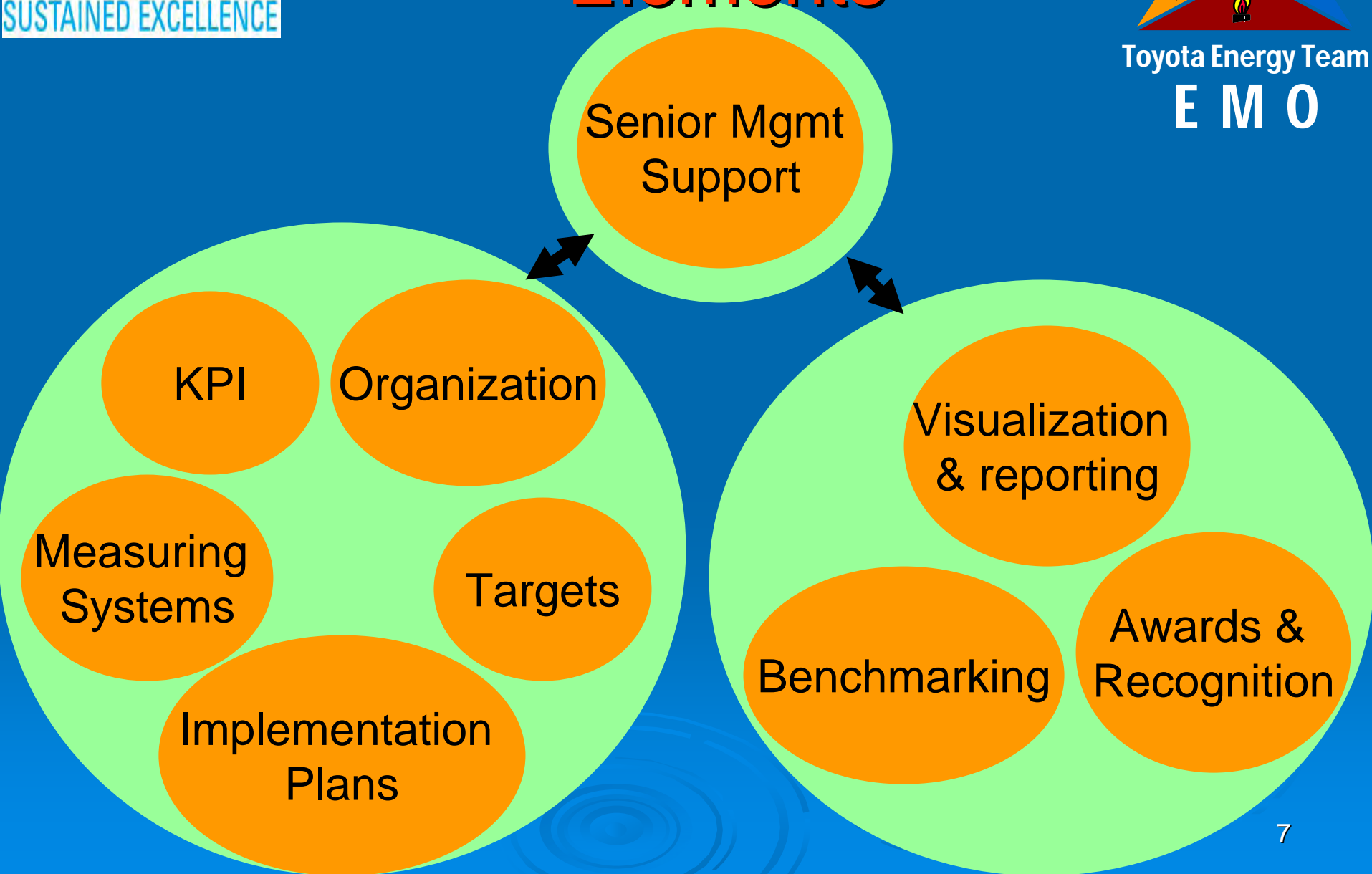
Carbon ↑
Offset



Energy Program Key Elements

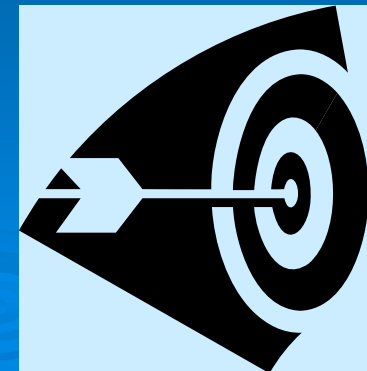


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Why Energy Star?

Toyota has been an Energy Star partner since 2003. The success of the company's Energy Management program is due to the continuing support of its executives and team members, sharing "Best Practices", adoption of new technologies, external resources, Energy Star tools, input from other Energy Star partners knowledge and experience.



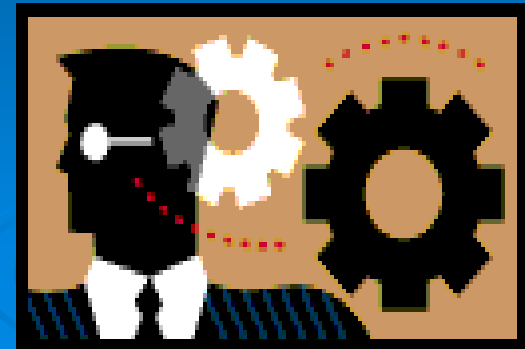
What Energy Star Provides

- Knowledge, Skill and Leadership
- Focus groups/Sector Meetings
- Tools/Methods/Ideas
- Benchmarking/Best Practices
- Awards and Recognition



Knowledge, Skill and Leadership

- Industry experience and knowledge
- Cross Functional Sectors
- Who's Who-networking
- Leadership, Management and Technical knowledge



Focus Groups/Sector Meetings

- Monthly conference calls and info sharing
- Industry focus groups
- Roundtable discussions: Problem resolution and best practice sharing
- Conferences WEEC/Energy Star/NASEO



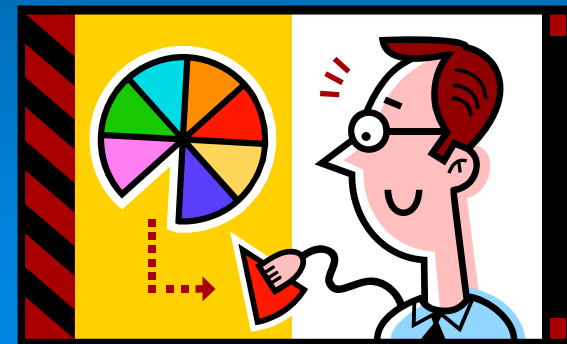
Tools/Methods/Ideas

- Guidelines to Energy Management Matrix
- Energy Performance Indicators-EPI
- Energy Campaigns and sponsorships
- Networking and communications
- Posters and marketing ideas



Benchmarking/Best Practices

- Benchmarking with Energy Star members
- Best practice sharing through quarterly sector teleconferences
- Networking with other member companies
- Benchmarking with members in other sectors



Awards & Recognition

- Company awards-Partner of the Year/Sustained Excellence
- Plant awards
- Best practice sharing with new members
- Presentations outside of Energy Star



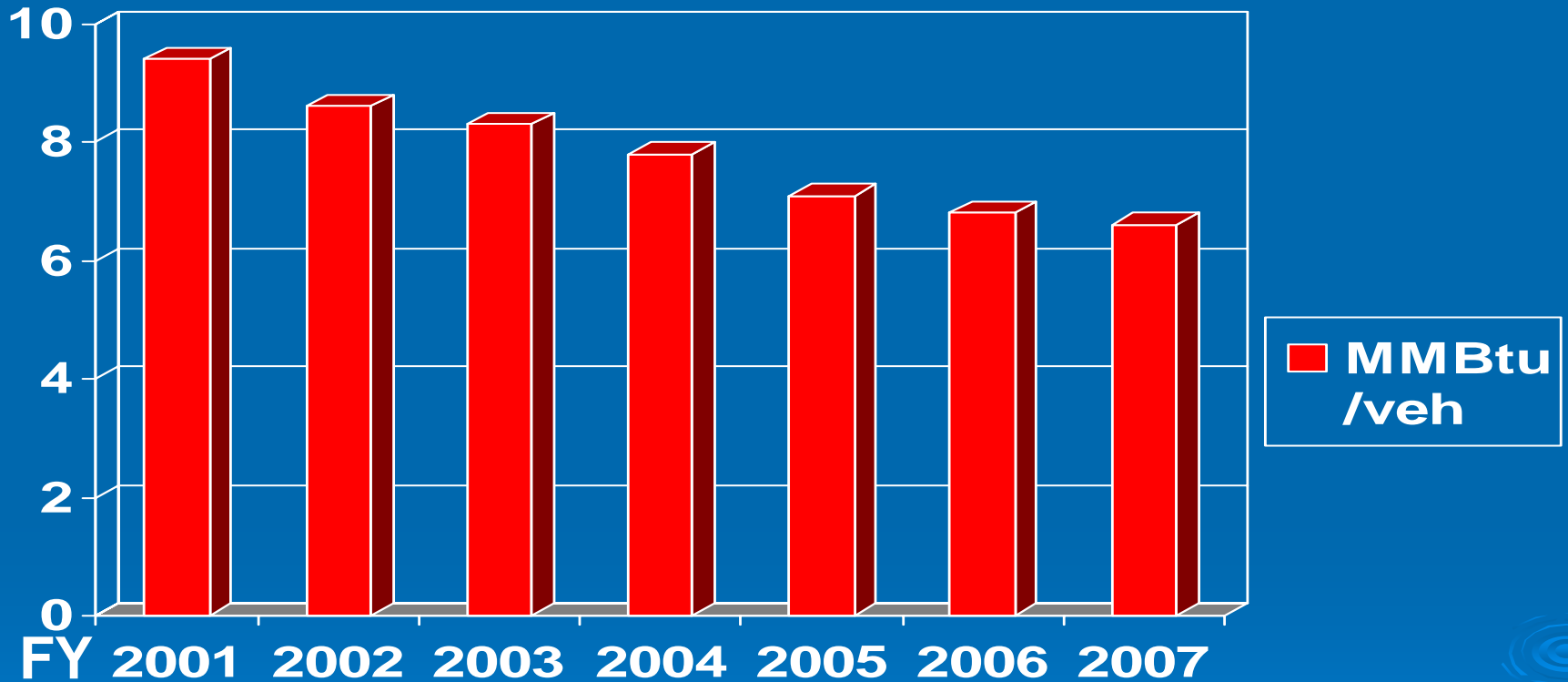
Toyota's Reflections/Benefits

- Best practices/technologies from other members
- Networking groups and members
- Awards and recognition
- Reduce energy program cost
- Share and gain best practices
- Minimize re-inventing the wheel

We all have Improved our Energy Programs and the Environment by Working Together!



Energy Overall Results



30% Energy Reduction
25% CO2 Reduction

NASEO Partnership?

- Regional/State/Local Programs-Sector meetings to discuss best practices, share ideas and new programs
- Roundtable discussions for benchmarking and developing new technologies
- Pilot program incentives and share results
- Enhanced communications and networking
- Interface with other organizations such as Energy Star or AEE



Only Use what you Need,
When you Need it,
In the Amount Needed!

