Connecticut Task Force to Study Methods for Reducing Consumer Packaging that Generates Solid Waste

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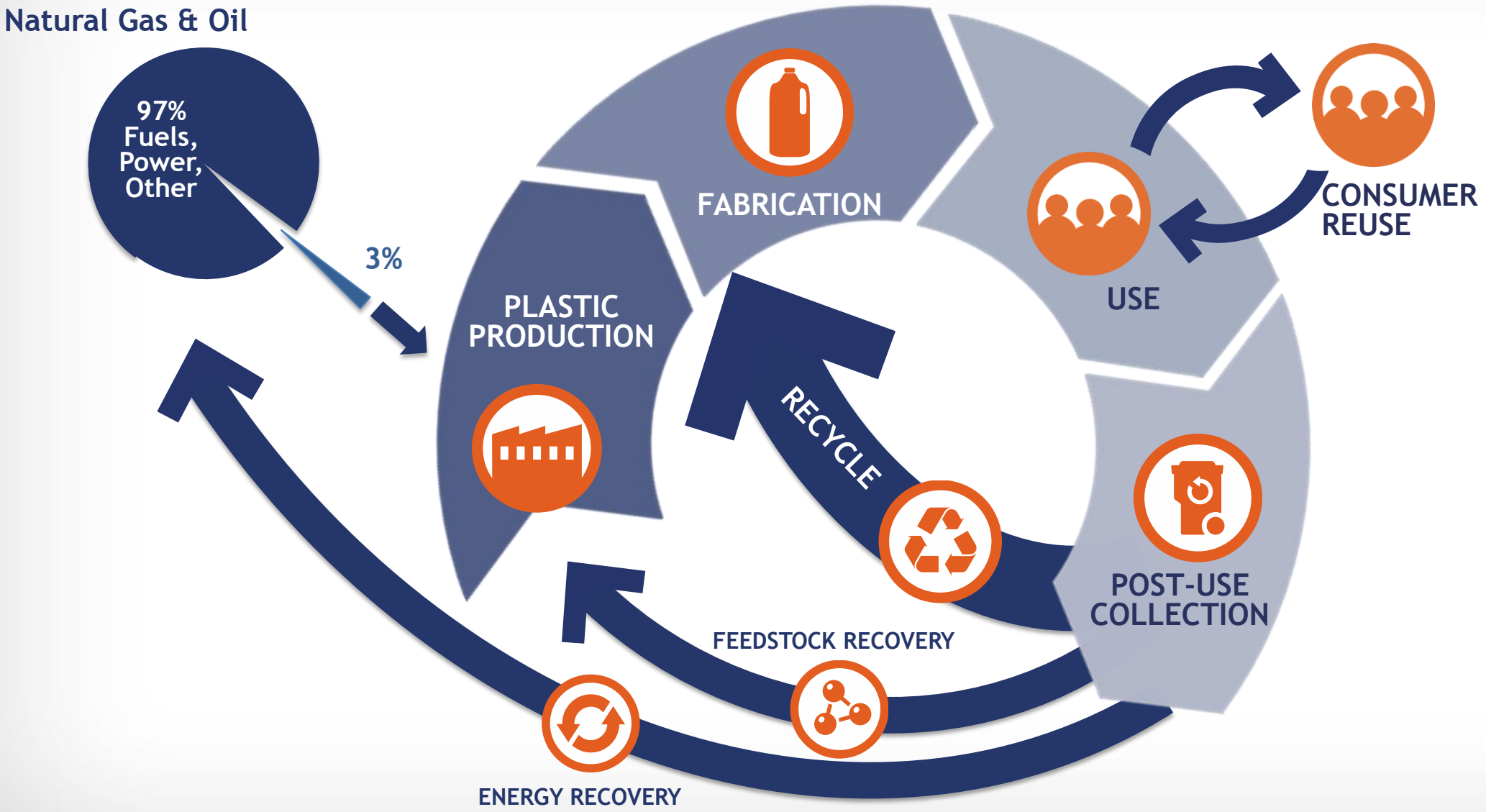
Vision for Plastics Recovery



Driving Results for Plastics Recycling Success

- **Providing support to:**
  - Assess processing at MRFs
  - Improve curbside mix of materials
  - Conduct non-bottle rigids research with APR
- **Tracking progress for:**
  - Bottles; flexible wraps, bags and films; and non-bottle rigids
- **Sharing knowledge by:**
  - Advocating for common terms
  - Growing film recycling across the U.S.
- **Promoting public policies to drive growth**
- **Working together with large, scalable partners**
  - e.g. TRP, KAB, APR

Working with States

- Outlined in Governing Magazine
- Based on existing work with states
- Combination of policy, voluntary, and industry programs

Improving Environmental Outcomes at the State Level

Through Sustainable Materials Management

State environment officials are always looking for better solutions to help achieve their environmental goals. Government leaders can improve sustainability by promoting sound policies that look holistically at the use of materials. By examining more broadly the value of materials, the concept of waste can be altered and perhaps even abandoned.

This is particularly true for plastics. Although plastics are invaluable to modern life — they're used to produce everything from bicycle helmets and child safety seats, to the packaging that keeps our food fresh and wholesome — people have questions about their impact on the environment.

But recent life cycle studies demonstrate the environmental benefits of plastics. While all materials impact the environment, plastics used in many consumer goods typically produce less waste, use less energy and create fewer greenhouse gas emissions than alternatives.

Too often, state waste policies assess the environmental impact of materials such as plastics through a very narrow lens, assuming recycling is the primary gauge of sustainability. Now, leading authorities are taking a holistic approach to measuring the environmental performance of plastics. They are also encouraging increased plastics recycling and incentivizing small business owners and entrepreneurs to develop dynamic, market-based solutions to capture the value inherent in plastics — rather than dumping them in landfills.

Understanding Sustainable Materials Management

This more holistic approach to environmental management is known as Sustainable Materials Management (SMM) — a method that uses life cycle analysis to measure environmental impacts across the entire life of a package or material. SMM takes into account the material, energy and water used across the entire lifespan of a product, from manufacturing to transportation to end of life.

SMM is especially useful in helping states evaluate and address the growing use of plastics because it switches the focus from weight-based recovery goals (recycling rates) to broader environmental goals. As an example, lightweight plastic packaging uses very little material and plays a key role in protecting and safely transporting goods, which reduces waste, material and energy use, and greenhouse gas emissions. SMM considers all the impacts of the packaging, from manufacturing and transportation to solid waste disposal, not just its ability to be recycled.

When viewed holistically, plastics and plastic packaging typically compare favorably to alternatives. A 2016 study by Trucost found that the environmental cost of using plastics for consumer goods and packaging was nearly four times less compared to using alternative materials to do the same job — a difference of $139 billion versus $533 billion annually.[1]

SMM provides a clearer picture of the environmental impact of materials, from beginning to end of life. While some communities believe minimizing certain uses of plastics may reduce waste, embracing SMM and adopting a broader view of sustainability provides a more insightful measure to evaluate environmental benefits and progress toward environmental goals. Policies that restrict the use of various plastics based on single attributes (recycling rates, biodegradability, etc.) can harm efforts to improve sustainability. The U.S. Environmental Protection Agency (EPA) and states such as Oregon and Minnesota are rapidly moving toward SMM.

Five Key Recommendations

ADOPT Sustainable Materials Management (SMM)

ENCOURAGE sensible, broadly supported recycling policies

EMBRACE voluntary plastics recycling programs and tools

LEVERAGE national partnerships for grants, loans and technical assistance

TREAT non-recycled plastics as valuable materials for conversion to fuels and chemicals

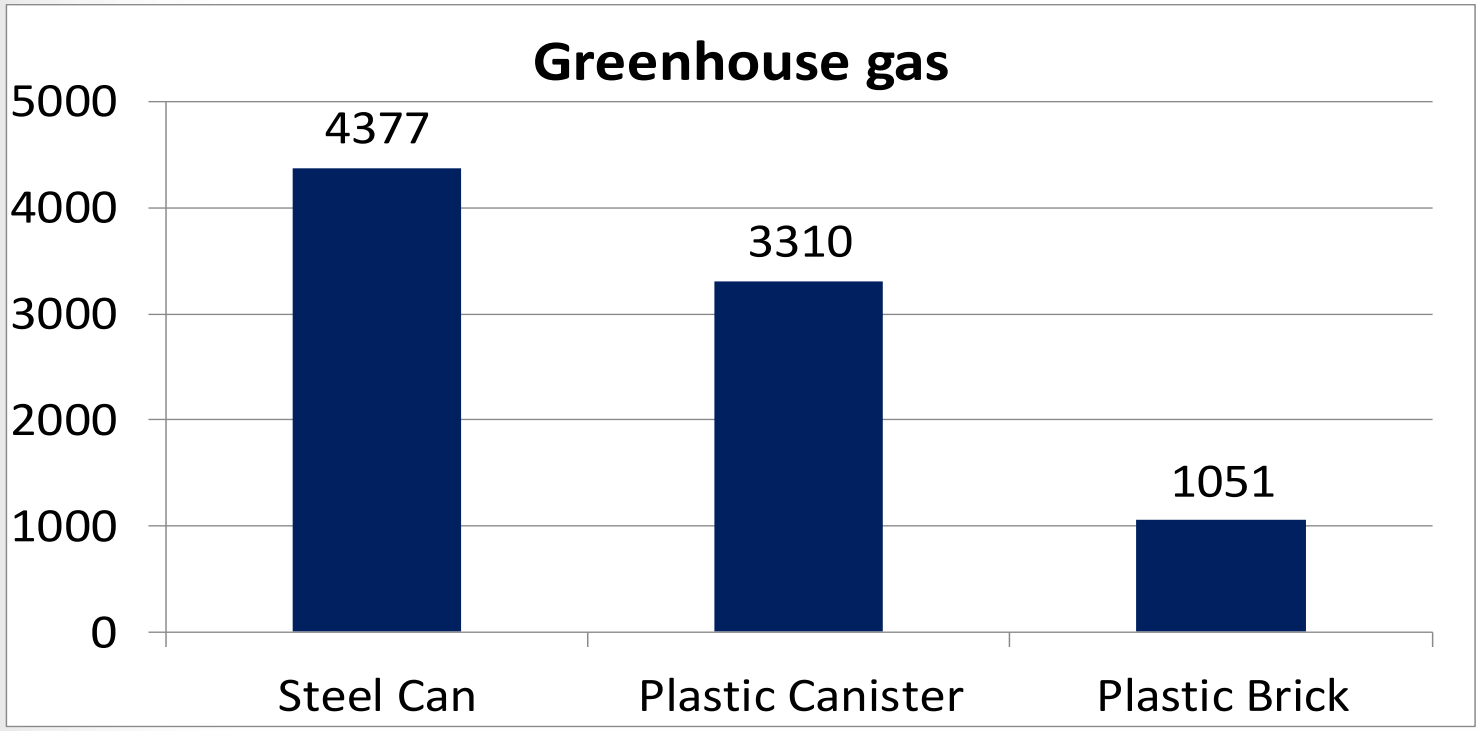
#1 Adopt SMM

U.S. Environmental Protection Agency Definition:

Sustainable materials management (SMM) is a systemic approach to using and reusing materials more productively over their entire lifecycles. It represents a change in how our society thinks about the use of natural resources and environmental protection. By looking at a product's entire lifecycle we can find new opportunities to reduce environmental impacts, conserve resources, and reduce costs.

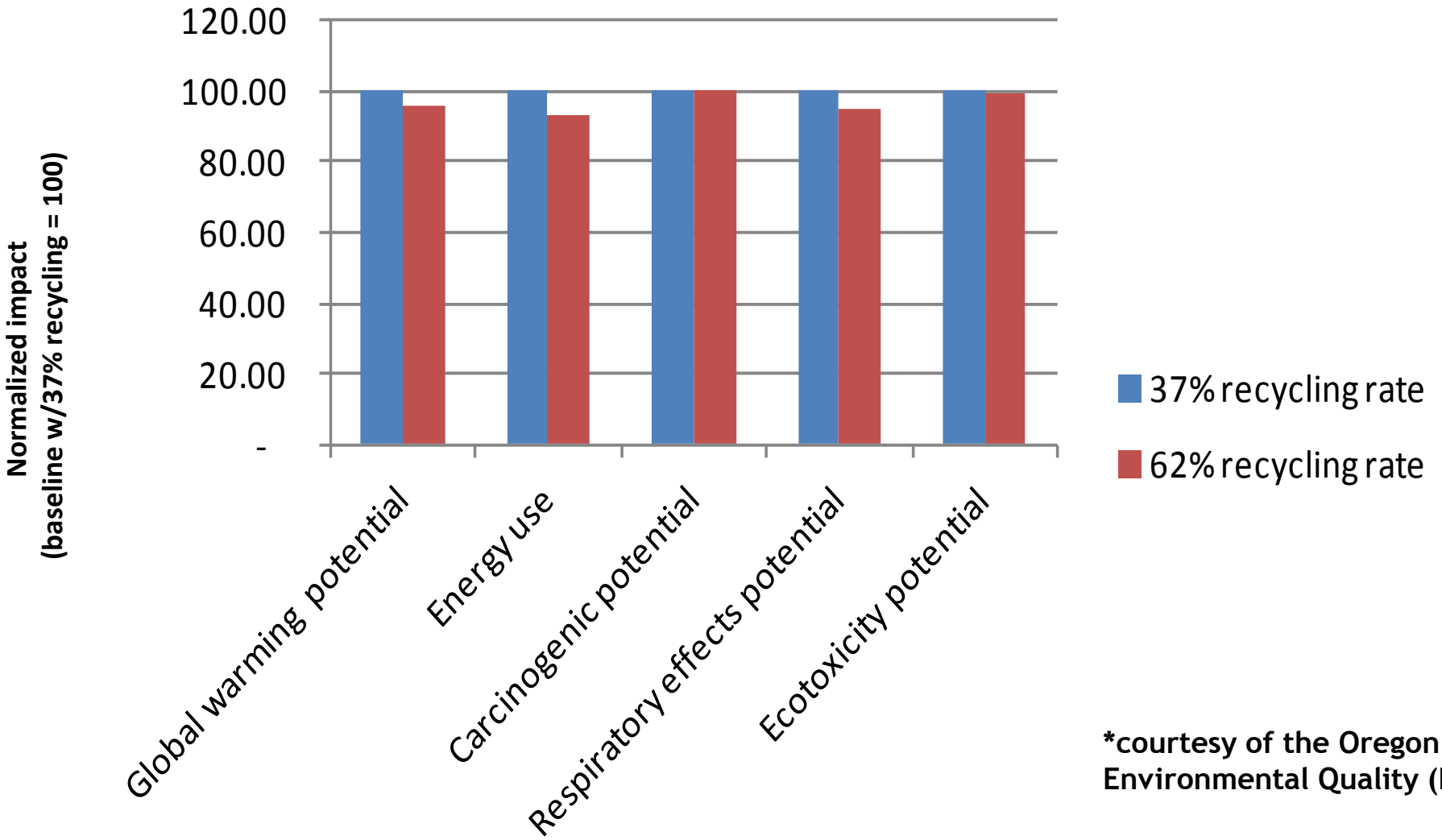
•Source: https://www.epa.gov/smm

Plastic Packaging Reduces Impacts



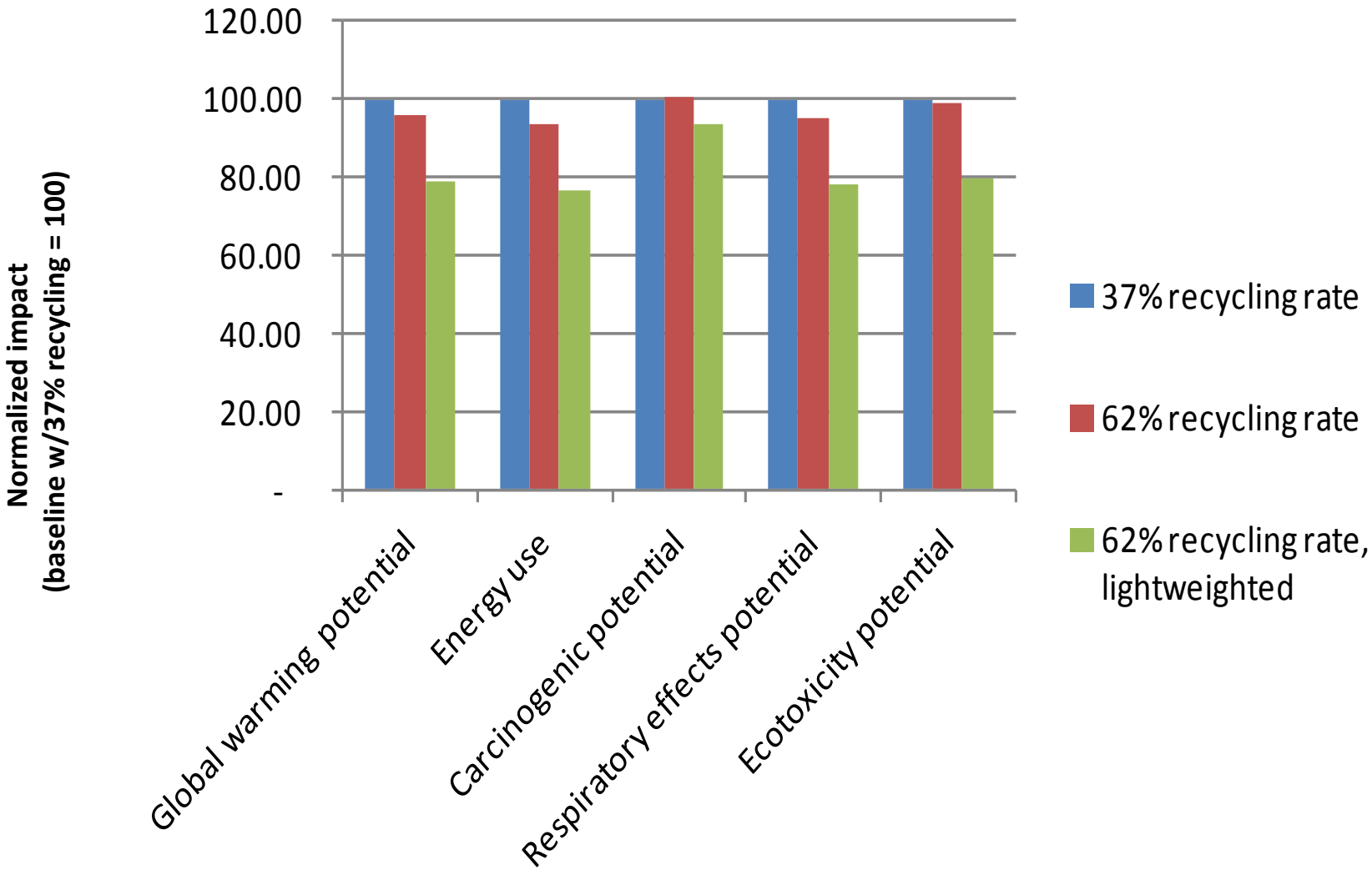
Source: Franklin Associates, September, 2008

Environmental Impacts of PET Recycling



***courtesy of the Oregon Department of Environmental Quality (DEQ)**

Larger Impact from Lightweighting



#2 Explore Broadly Supported Policies

- ☑ Enforce Connecticut's existing laws and regulations*
  - ☑ Mandatory recycling of "designated recyclables"
  - ☑ Commercial generators
  - ☑ Multi-unit residential dwellings
- ☑ Relax certain regulations to encourage economic development (e.g. mixed waste processing/secondary sortation)*
- ☑ Earmark bottle deposit escheats directly to recycling programs and protect from the General Fund (~$20.7 million in 2015)
- ☑ Explore policies such as pay-as-you-throw, provide technical assistance and BMPs, and focus on food waste PREVENTION (~40% of MSW disposal)

**Connecticut DEEP 2016 Comprehensive Materials Management Strategy*

#3 Embrace Voluntary Programs

WRAP RECYCLING
W.R.A.P.
plasticfilmrecycling.org
ACTION PROGRAM

recycling today

Connecticut unveils initiative to boost plastic film recycling

HARTFORD BUSINESS.COM
A PUBLICATION OF THE HARTFORD BUSINESS JOURNAL

DEEP looks to elevate plastics recycling

recycle your plastics

Terms and Tools

RECYCLE GROCERY RIGID PLASTICS

#4 Leverage National Partnerships

THE RECYCLING PARTNERSHIP

CLOSED LOOP fund

KEEP AMERICA BEAUTIFUL INC.

U.S. DEPARTMENT OF ENERGY

#5 Treat Non-Recycled Plastics as Feedstocks

Light industrial Manufacturing

- regulated under existing manufacturing framework
- plastic feedstock not a solid waste
- producing valuable fuels and raw materials
- not landfills or WTE facilities
- recyclers determine viable markets
- allow disposal of off-spec materials and by-products

Waste Disposal

- landfills
- waste-to-energy facilities

- plastics-to-fuel
- plastics-to-petrochemicals
- other conversion technologies

Moving SMM Forward in Connecticut

- Focus on environmental outcomes from materials management and recycling/recovery
- Embrace life cycle analysis
- Utilize tools and programs that gain efficiencies
- Enforce Connecticut's existing laws and regulations
- Focus on preventing food waste, rather than after its been wasted
- Focus on broadly supported programs and policies
- Find consensus among key stakeholders

Thank you!

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