

# Harnessing the co-benefits of energy efficiency

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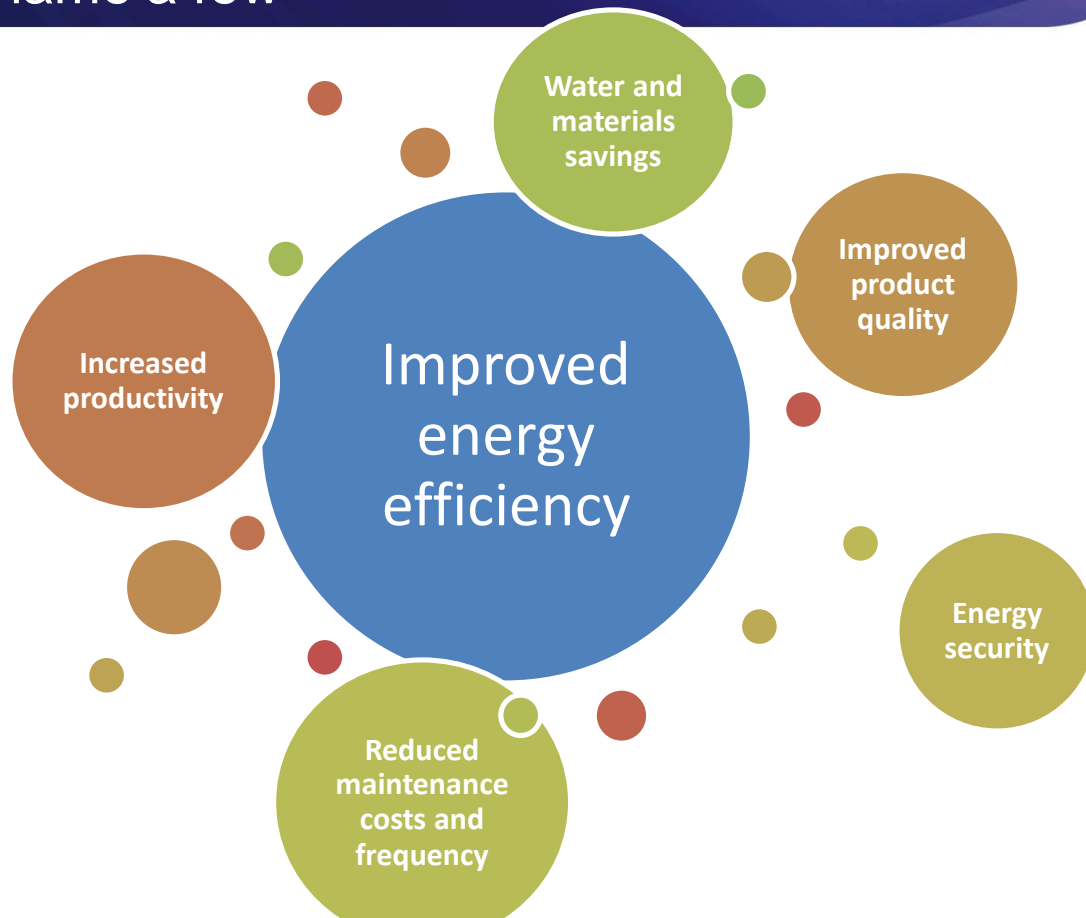
# Outline

1. Approaches to identifying and quantifying co-benefits of energy efficiency
2. Local business experiences
3. Harnessing the bigger picture

*'Evidencing the role energy efficiency improvements can play in other types of modernisation projects might help raise industry interest in exploring available technologies, methodologies or measures.'*

*IEA Capturing the Multiple Benefits of Energy Efficiency, 2014*

# Energy efficiency co-benefits – just to name a few



Co-benefits can be  
2.5 times value of  
energy efficiency

IEA, 2014

# Co-benefits and business energy efficiency programs – ACEEE analysis

## Lawrence Berkeley National Lab Study

Number of projects identified	81
Percentage demonstrating co-benefits	67%
Simple payback on energy savings alone	1.43 years
Simple payback with all benefits	<b>0.99 years</b>



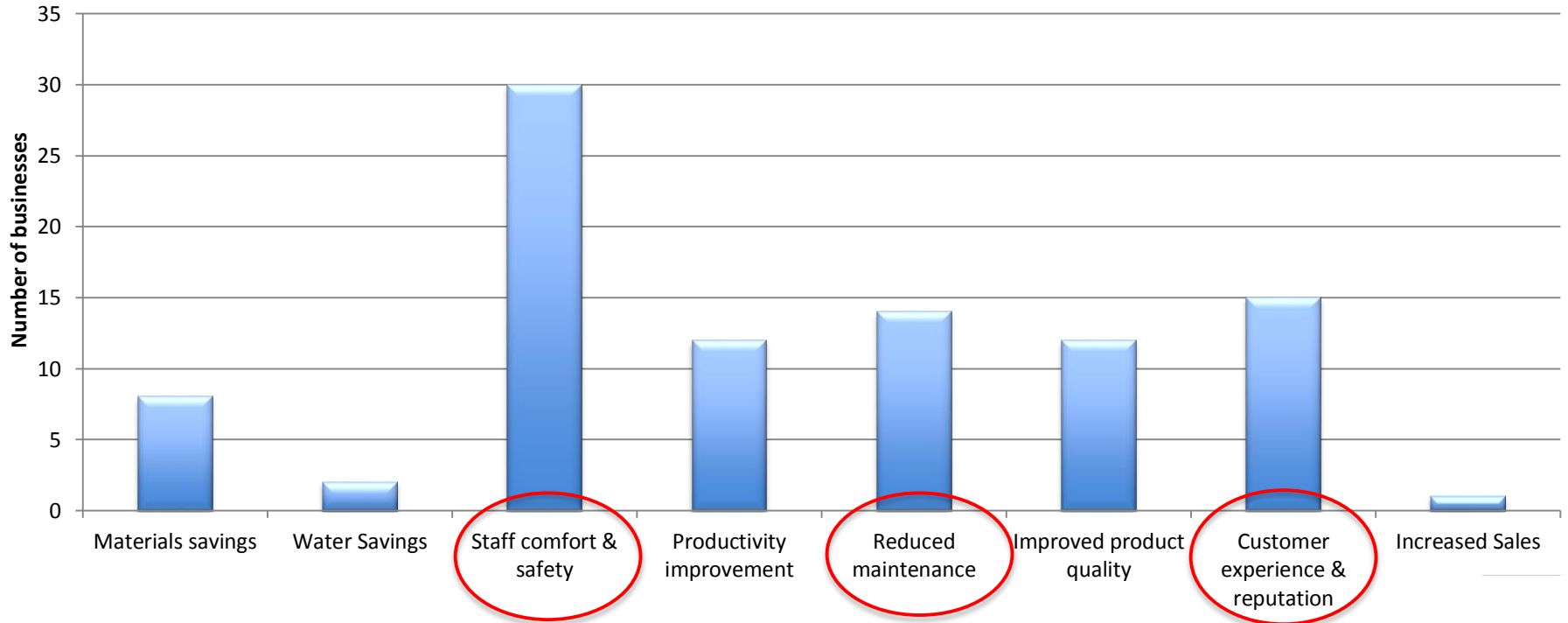
## Industrial Assessment Center (IAC) Database

Improvement type	Frequency	Non-energy cents saved per kWh	Ratio \$ non-electricity savings per \$ electricity saved
Air compressors (hardware)	496	1.43	0.24
Air compressors (operations)	25	0.34	0.06
Motors (hardware)	188	0.43	0.12
Motors (maintenance, repair)	23	0.84	0.14
Motors (system drives)	1123	0.06	0.06

# Energy efficiency and co-benefits in Victorian small and medium sized businesses

## Energy efficiency co-benefits

As reported by SMEs receiving capital grants (N=98)



# Examples



Estimated 30% increase in productivity of blast freezing operations due to improved operation of the compressors and condensers.

“The new steam traps have improved the consistency of the steam throughput to the ironer bed, and as such improved its efficiency and the end product of our linen. It has also helped us boost our preventative maintenance scheme”.

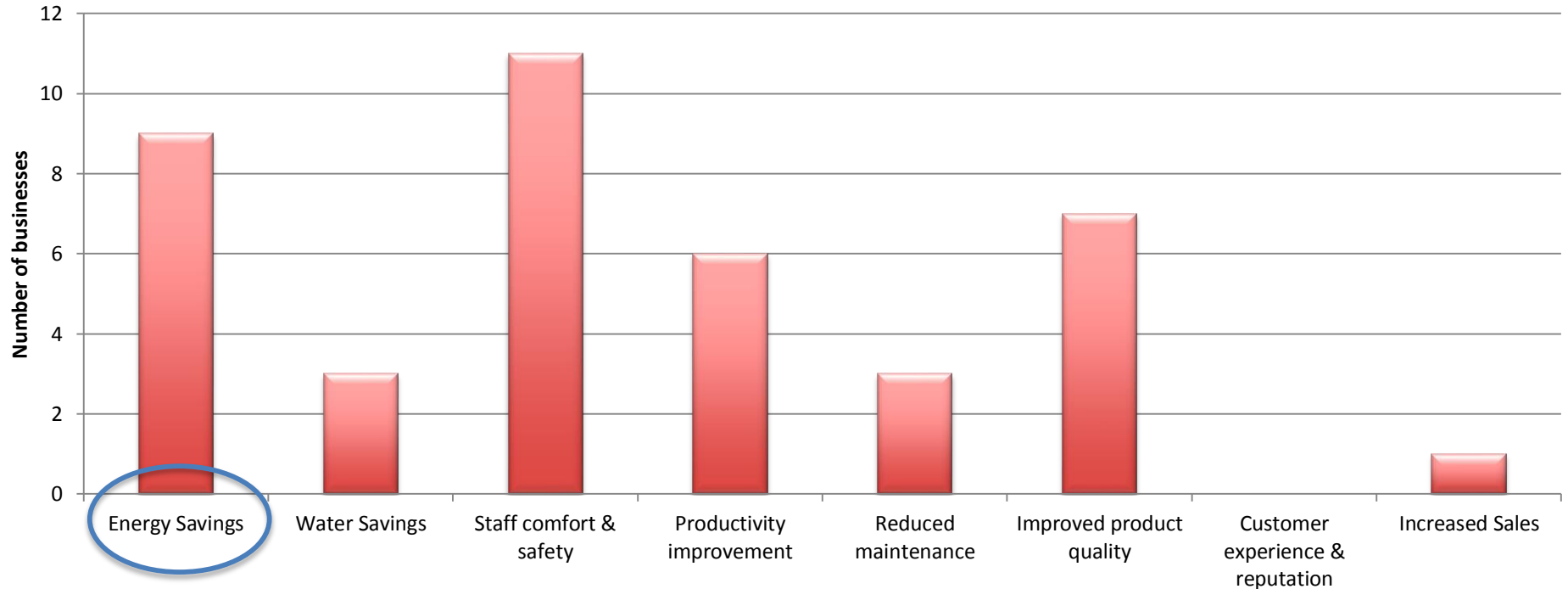
Ray Hayes, General Manager



# Energy efficiency from another angle – materials efficiency in Victorian SMEs

## Materials efficiency co-benefits

As reported by SMEs receiving capital grants (N=35)



## Insights and conclusion

- Consideration of co-benefits strengthens the case for energy efficiency
- Can build support across the businesses, including sharing results with employees
- External energy efficiency experts have an important role in helping businesses identify and quantify co-benefits
- Use of consistent metrics will assist program evaluation and make the case for energy efficiency