



# Emissions and energy productivity

Meeting current and future commitments

Dr Gordon Weiss | 4 April 2017

energetics

# Agenda

1 40% is not good enough

2 The gap to be closed

3 EP and emissions

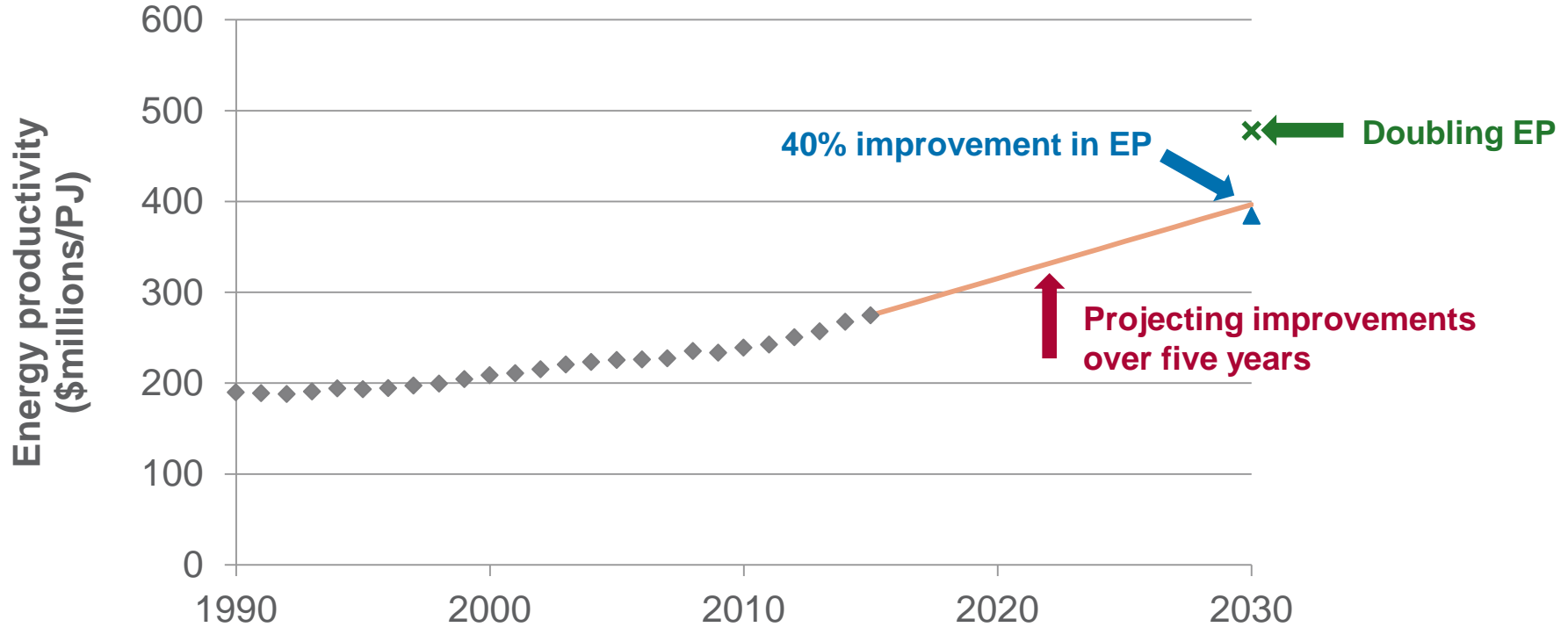
4 Doing it without 2xEP

5 Doing it with 2xEP

6 What it means



# 40% isn't good enough



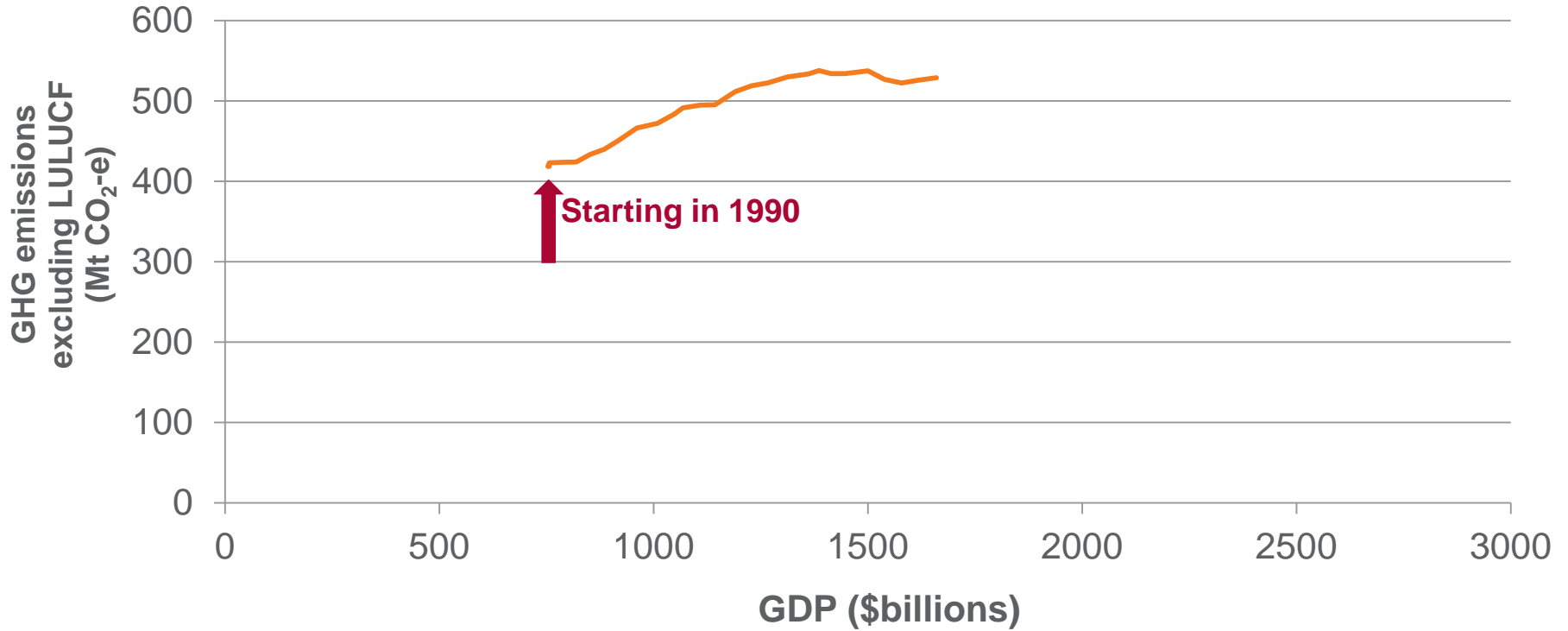


No one said it would be easy

It's just essential

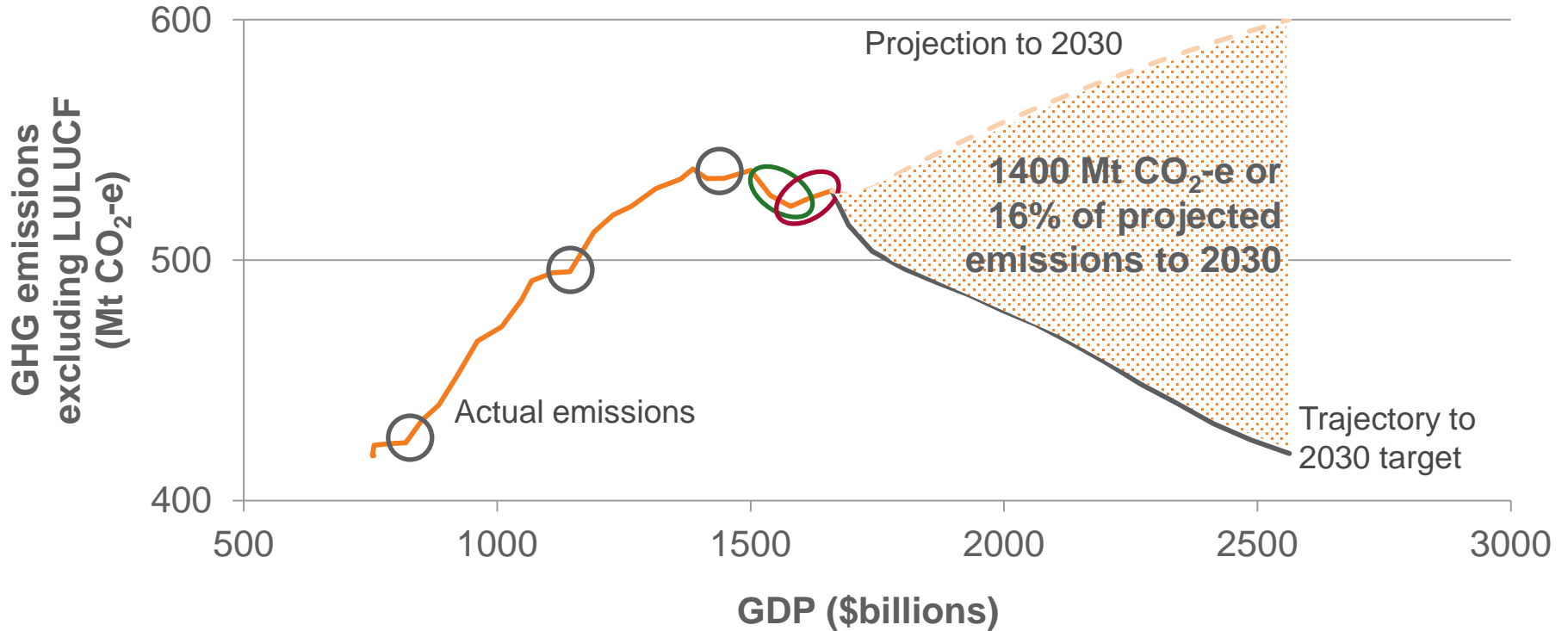


# The gap to be closed





# The gap to be closed



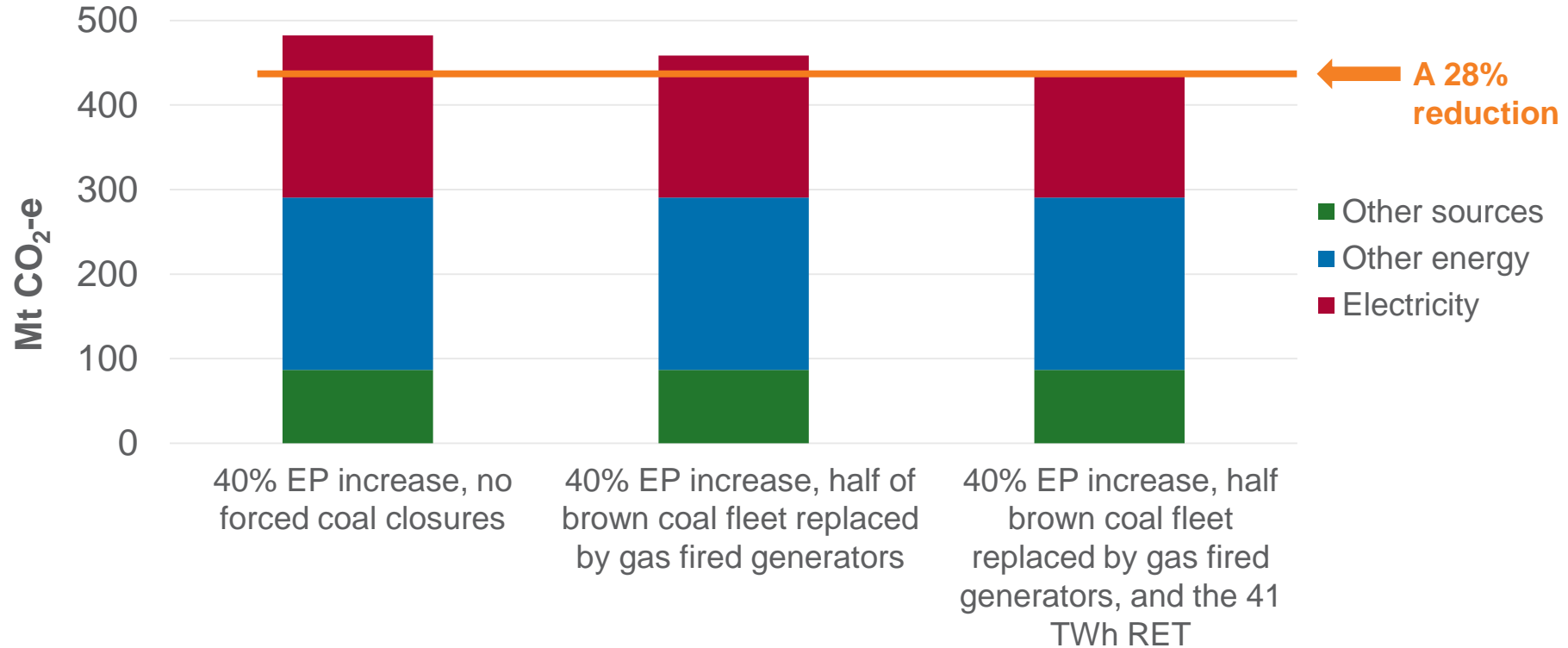
# Energy productivity and reducing emissions : what is the relationship?



1. Pick a rise in energy productivity and calculate the change in total energy consumption.
2. Assume that the change in electricity consumption is the same as the change in total energy consumption.
3. Adjust the generation mix to meet the calculated electricity consumption, accounting for policy measures and constraints in the system. Determine the total emissions due to electricity generation.
4. Add the emissions due to energy use other than electricity, estimated by scaling the emissions in 2015 due to those sources in proportion to the change in total energy use.
5. Add emissions due to non-energy sources.



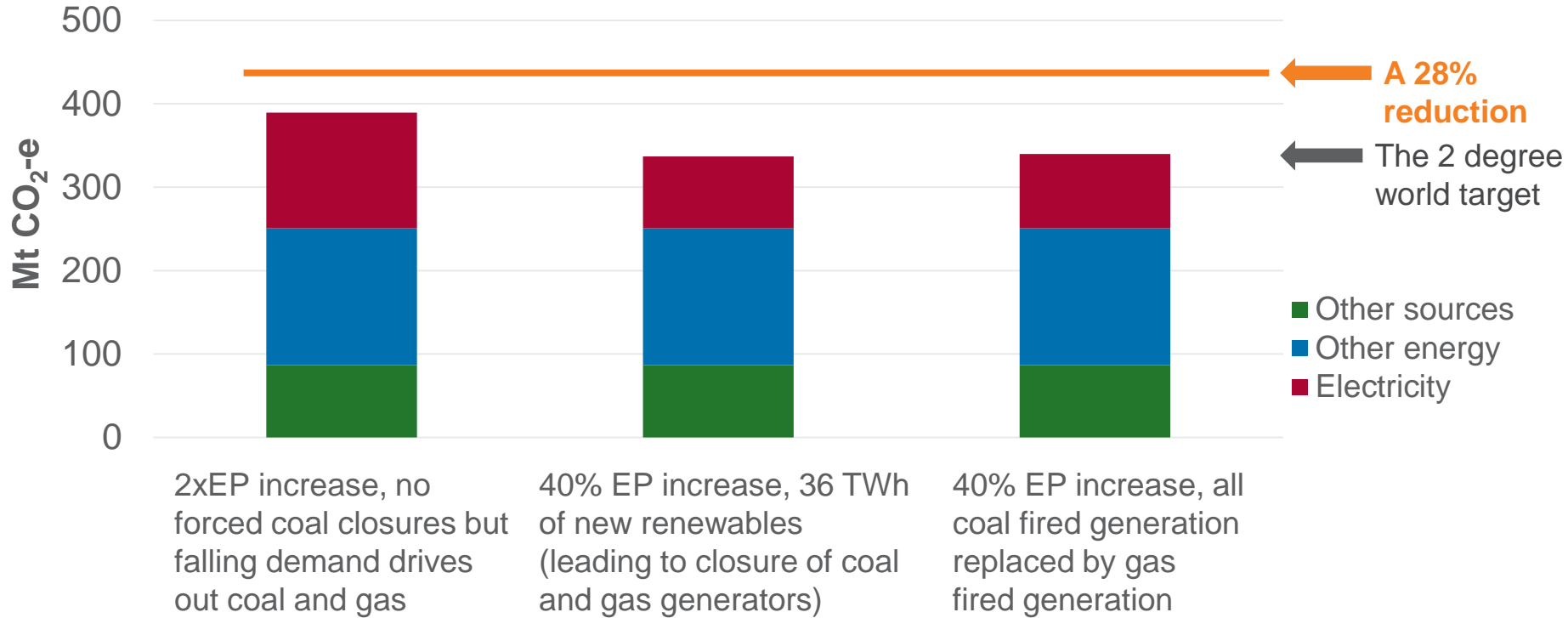
# Doing it without 2xEP







# Doing it with 2xEP





# The message is clear

If we don't improve energy productivity beyond BAU, our options are:

- sweat over our current Paris climate target
- close more brown-coal fired power stations
- find much more gas
- have another fight over the RET

If we double our energy productivity we can:

- 'easily' meet our Paris climate commitments
- help address the current energy supply crisis





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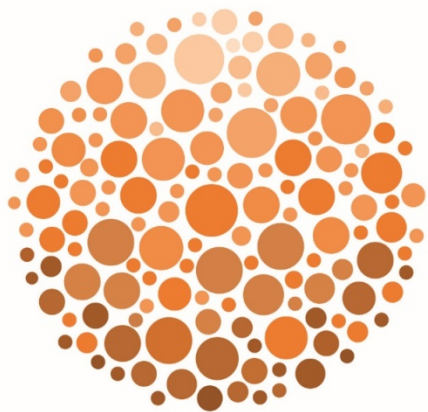
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