

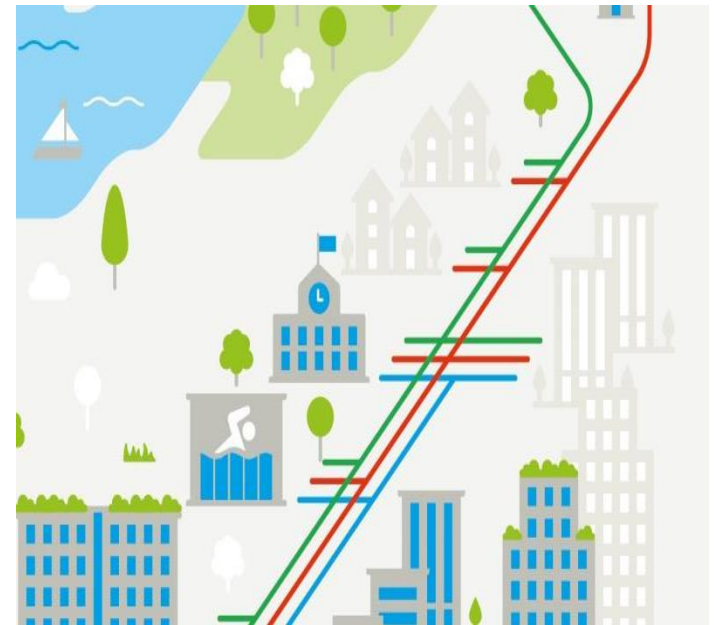
Scottish Renewables Low-carbon heat briefing

November 2018

Contents

Decarbonising Scotland's heat:

- Where do we need to be
- What is the Scottish Government doing?
- Issues:
 - District heat networks
 - New buildings
 - Rural heat



Key points

Progress being made on energy efficiency, but big question marks remain about renewable heat:

- **District heat regulation:** measures to boost the market lost
- **New buildings:** seize opportunity to make new buildings ultra low-carbon
- **Rural heat:** set out how *Energy Efficient Scotland* will deliver this

Context

2030 Climate Change Target: **61% cut in emissions**

Achieved by:

- 50% of all energy from renewables
- 30% economy-wide energy efficiency improvement

Heat (homes, public & commercial buildings)

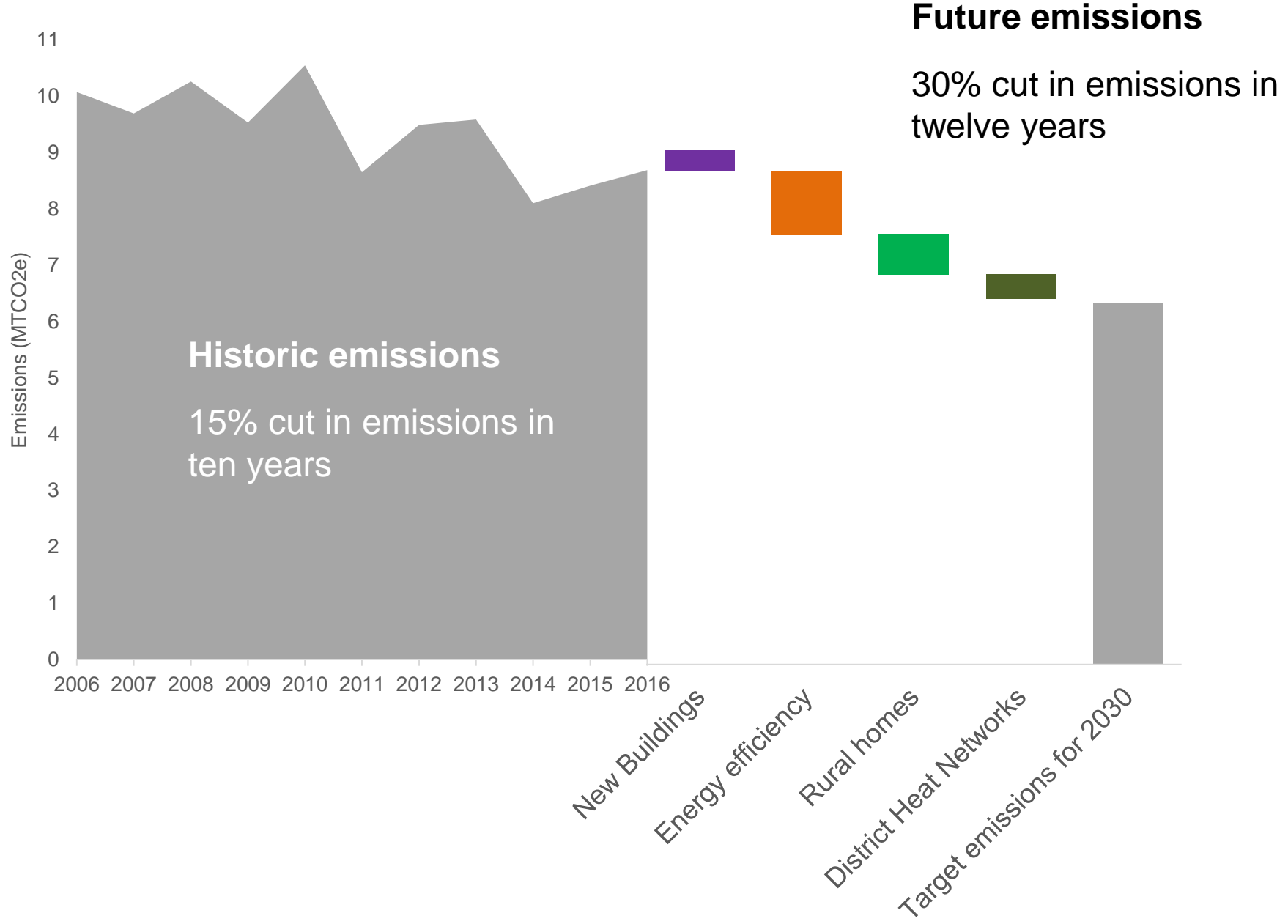
- 15% demand reduction
- 20% renewable heat

How do we get there?

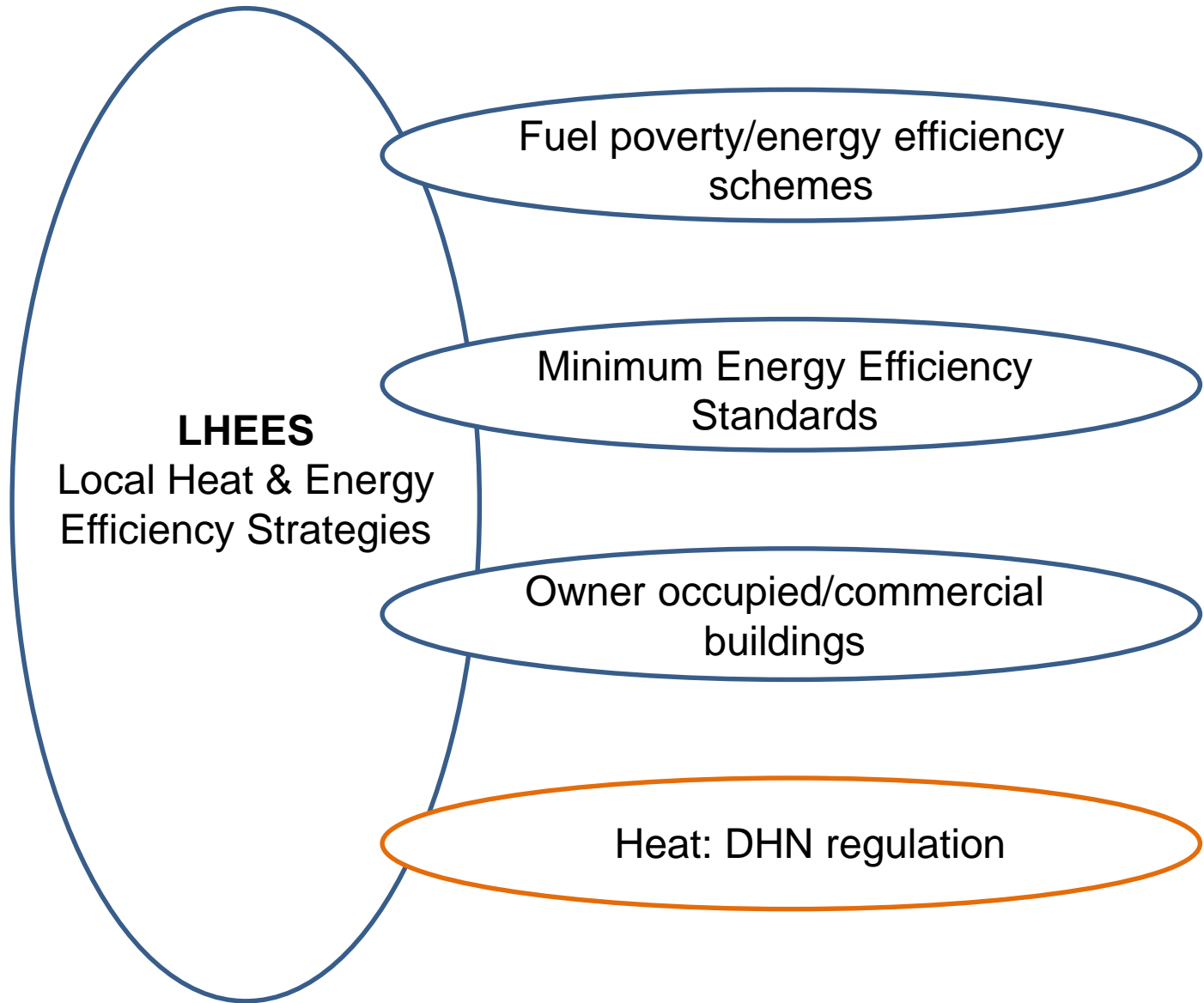
To achieve a 30% cut in emissions from domestic & non-domestic buildings by 2030:

- Energy efficiency: all homes brought up to ~ EPC C
- Most buildings in rural areas (off-gas grid) switched away from coal, oil and LPG
- x10 increase in volume of heat delivered by heat networks
- New buildings fitted with heat pumps

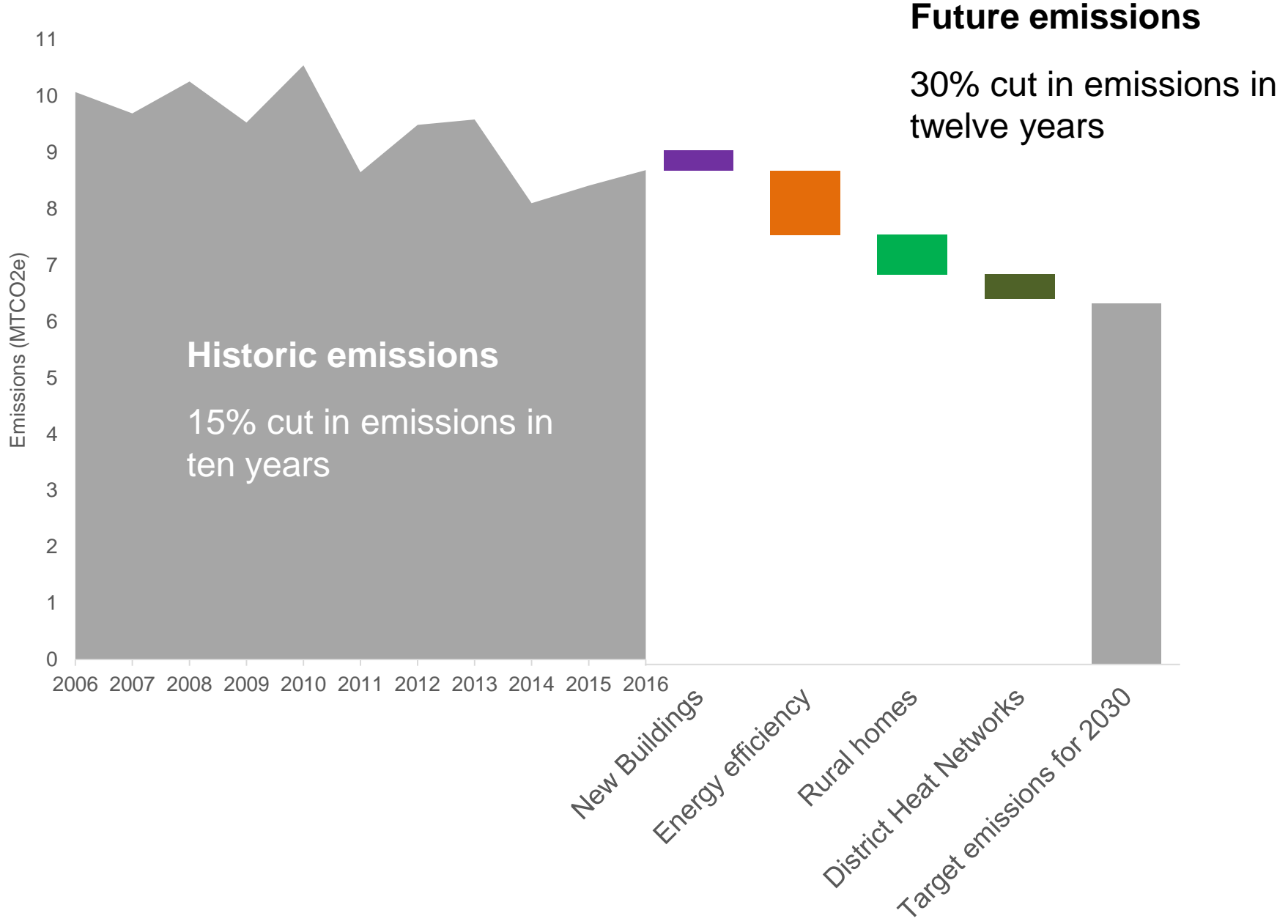
Emissions from buildings



The *Energy Efficient Scotland* Programme



Emissions from buildings

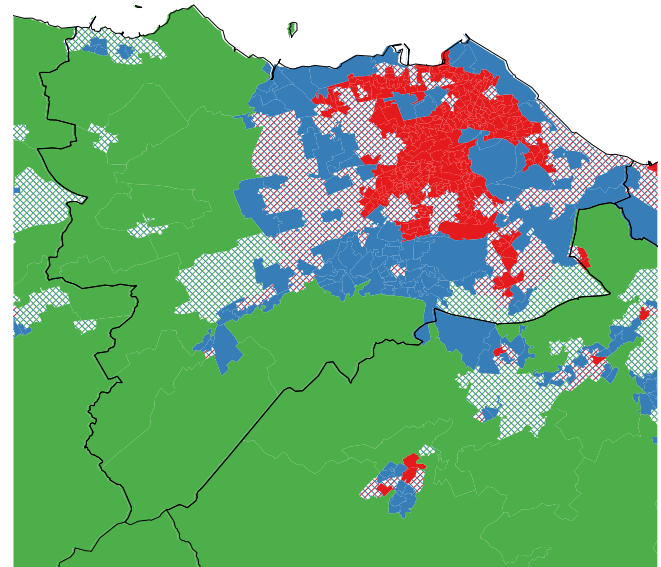




District Heat Networks

Proposed measures:

- District heat zones
- ~~Obligation to connect some buildings (subject to socio-economic assessment)~~
- ~~Exclusive concessions~~
- License (standards, consumer protection, future-proofing)
- Waste heat





District Heat Networks

	Scotland	England & Wales
Large projects in development	~15	150
Funding available	£60m (shared with other technologies) to 2020	£320m for DHN over next 3 years (to 2022)

- We need a pipeline of projects to hit the tenfold increase needed by 2030
- Projects take many years to develop & build





Rural Heat (off-gas grid)

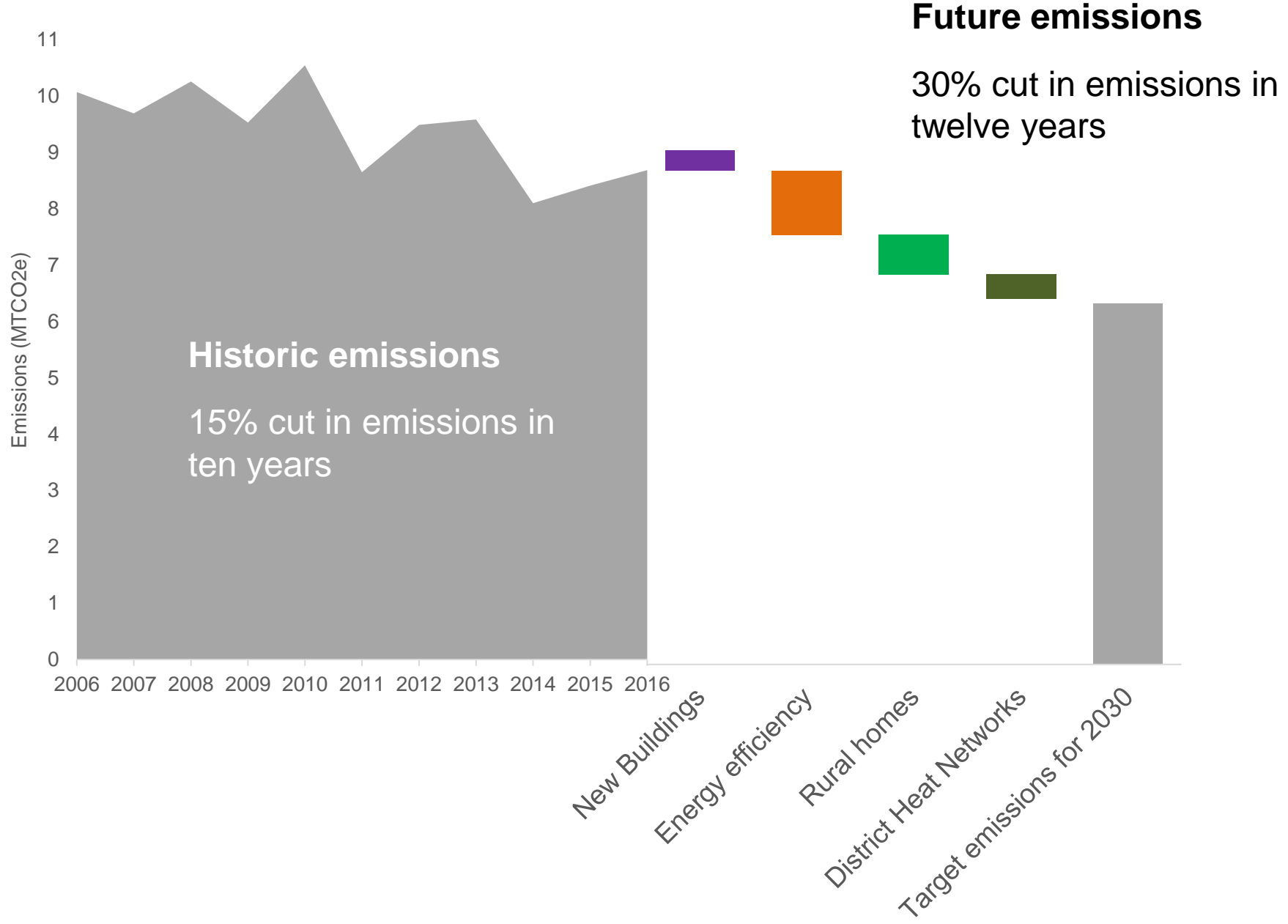
- Scottish Government: “a near-term priority”
- 190k homes using coal, oil & LPG

Scottish Renewables proposals:

- No new installations of oil & LPG boilers from 2025
- Continue incentives to help with capital costs
- Off-gas grid zones prioritised & awareness raised
- Don't subsidise high-carbon replacements (fuel poverty schemes)



Emissions from buildings





New Buildings

- **Review of buildings standards** to look at reducing energy & carbon
- Cheapest sector to integrate low-carbon heat
- Lower heating & energy bills
- Phase out the use of gas heating in all new builds
- Net zero buildings by?

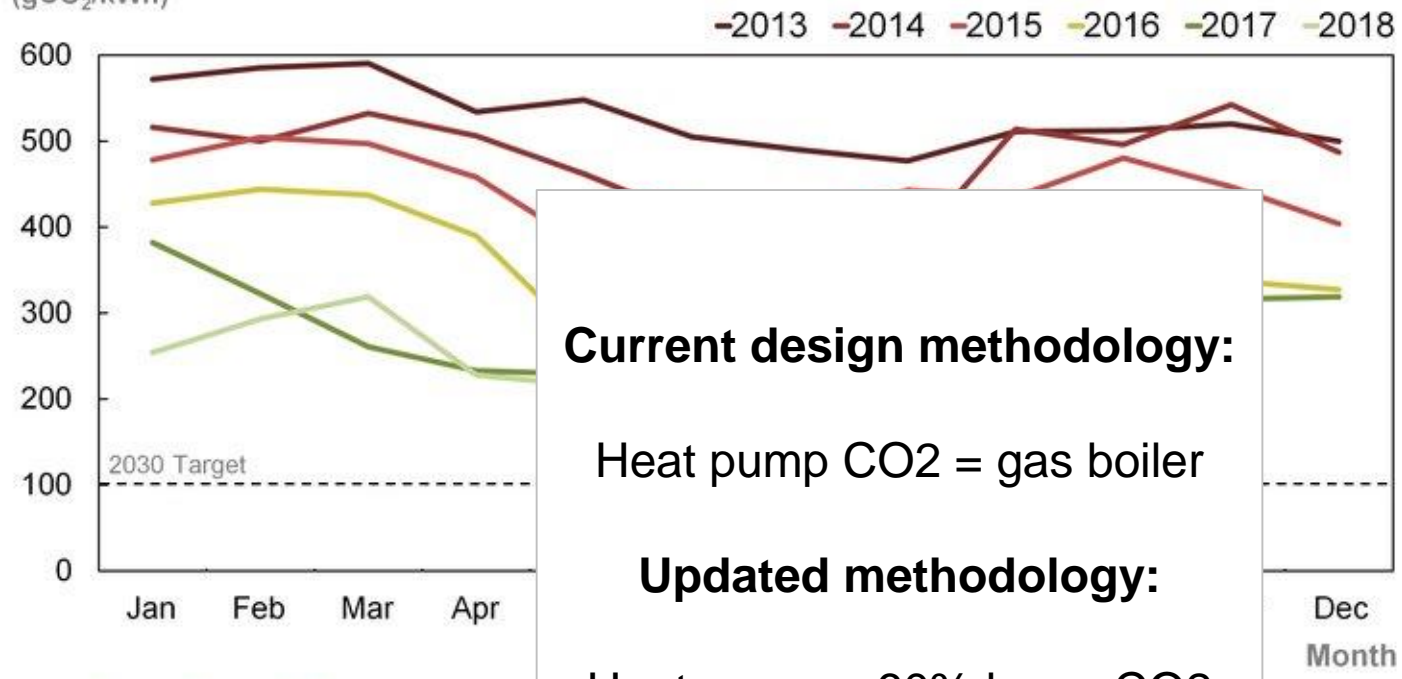




The Decarbonisation of British Electricity

2018 has so far been the 'greenest' year on record in Great Britain

Carbon Intensity
(gCO₂/kWh)



Current design methodology:
Heat pump CO₂ = gas boiler

Updated methodology:
Heat pump = 60% lower CO₂ than gas

49.7% decrease
from 2013 to 2017

- 2013 **529** gCO₂/kWh
- 2014 **477** gCO₂/kWh
- 2015 **443** gCO₂/kWh
- 2016 **330** gCO₂/kWh
- 2017 **266** gCO₂/kWh
- 2018 **252** gCO₂/kWh*
year to date

To recap:

Progress being made on energy efficiency, but big question marks remain about renewable heat:

- **District heat regulation:** measures to boost the market lost
- **Rural heat:** set out how *Energy Efficient Scotland* will deliver this
- **New buildings:** seize opportunity to make new buildings ultra low-carbon

Thanks for listening