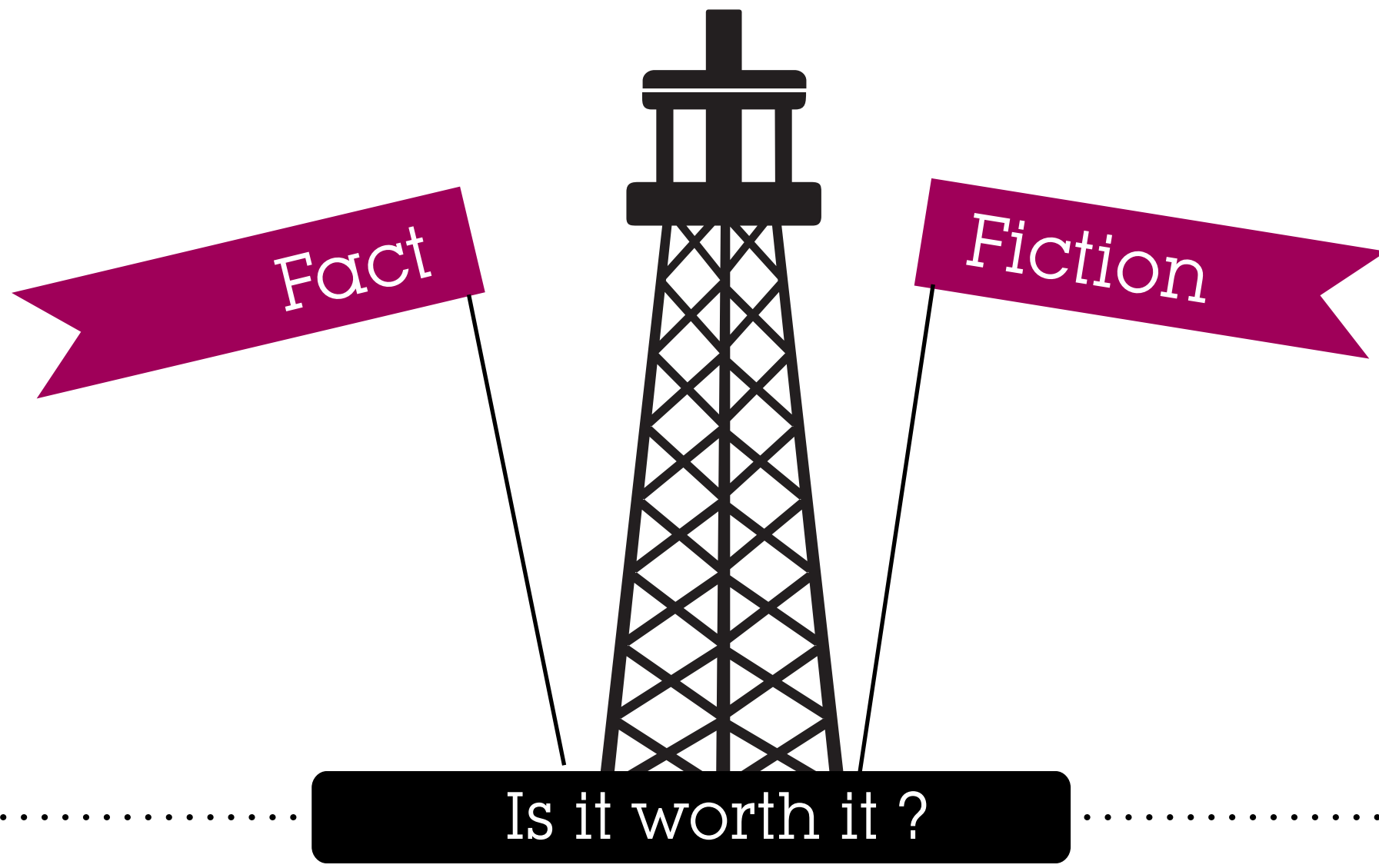
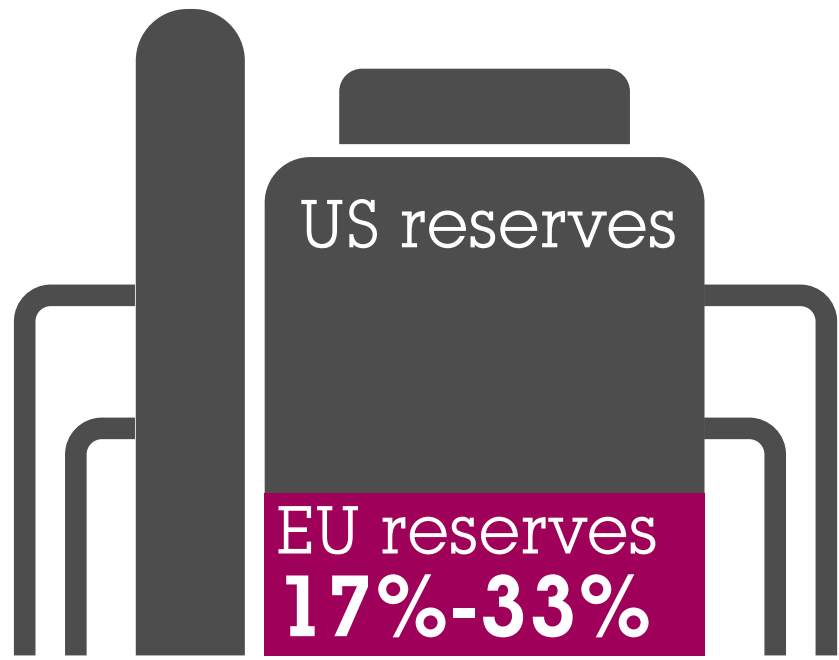


EU Shale Gas Revolution: Facts vs Fiction



Fact - The EU has potentially sizeable shale reserves



20 years

Time it took for
US shale gas industry to reach scale

4 years

Time spent so far
drilling wells
to explore shale reserves in EU

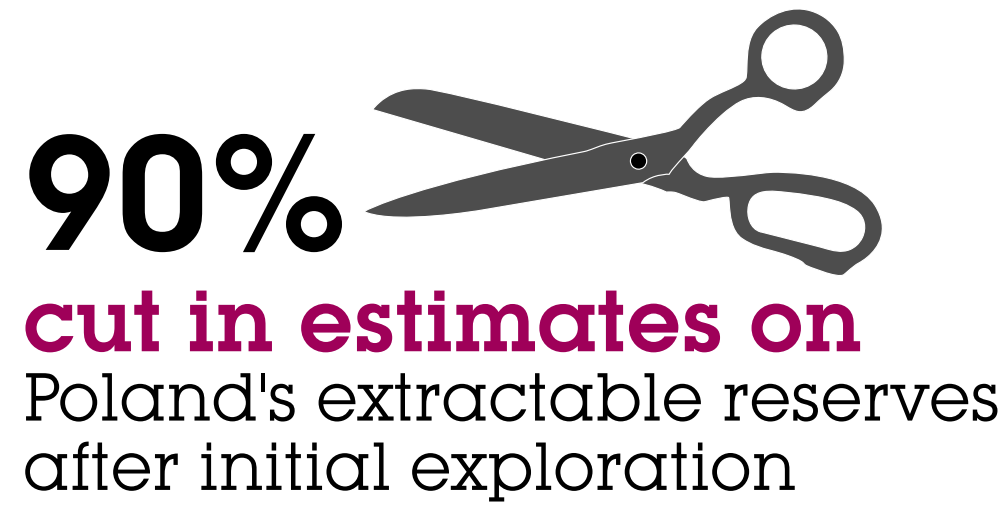
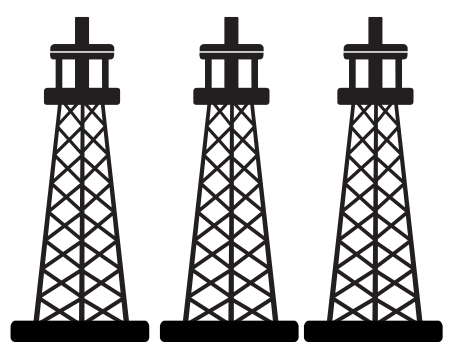
Fiction - shale gas is cheap and will reduce energy prices



33,500 - 67,000 wells

needed across EU by 2050 to reduce prices

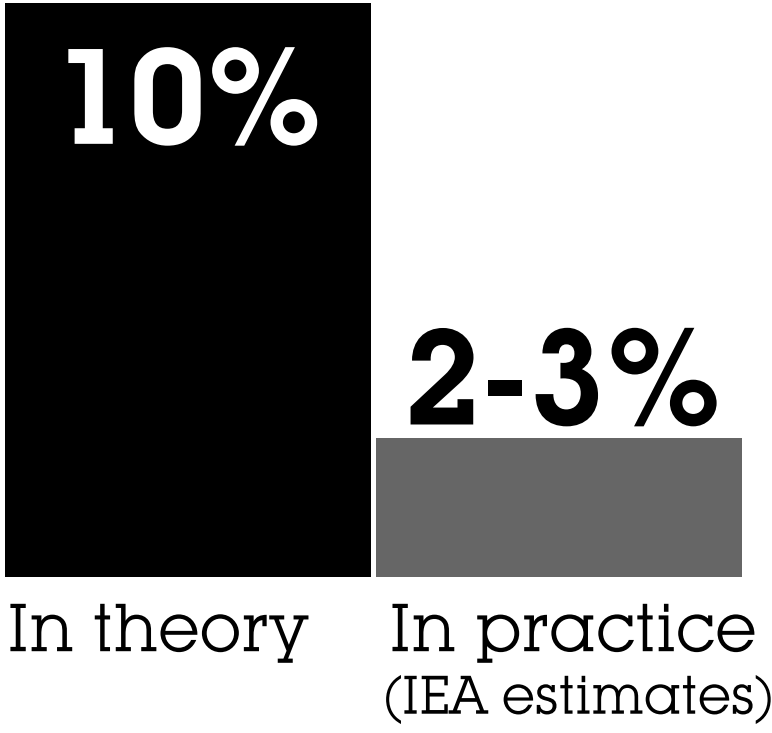
Current no. of wells **< 100**



Need to drill surface area the **Size of The Netherlands** to reach production level to meet 10% EU gas demand by 2030

Fiction - shale gas will improve energy security

The proportion of EU gas demand that shale can meet by 2030



21 of EU's 28 countries

import
Russian Natural Gas



Fiction - shale gas will help to address climate change

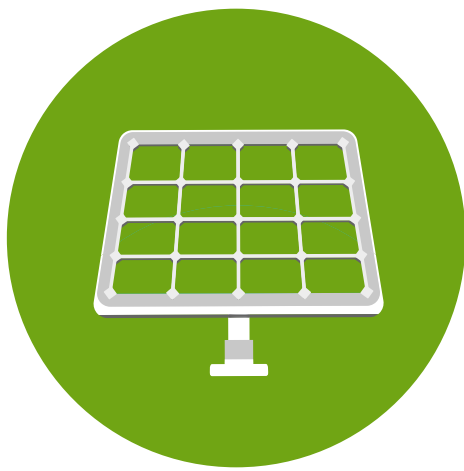
Carbon footprint of:

Shale



423-535kg
CO₂e/kWh

Solar



75-116g
CO₂e/kWh

Onshore Wind



20-96g
CO₂e/kWh

Offshore Wind



5-13g
CO₂e/kWh

Tidal



5-13g
CO₂e/kWh

A £32bn investment in shale gas

could displace

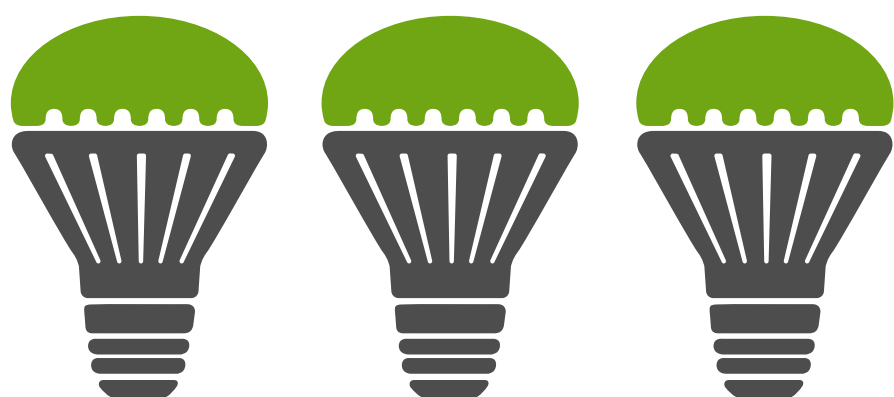
12GW of offshore or 21GW of onshore wind capacity

Benefits of an energy revolution driven by interconnection, energy efficiency and renewable energy

↓ 80% Reduction in gas demand
by 2050 if 80% renewables in power generation mix

↓ 62% (on 1990 levels) to **45%** Reduction in oil & gas dependency
by 2020 if the EU meets 20% energy efficiency goal

If targets are met



Energy efficiency cost savings potential
€1-2trillion between 2020-2030
€500bn a year by 2050 EU

Savings on import costs from renewables targets

€190bn from 27% target

€450bn from 30% target

€460bn by 2030 from integrating the European energy grid