

How deep is Shell drilling into the CARBON BUBBLE?

UP TO
\$21
TRILLION

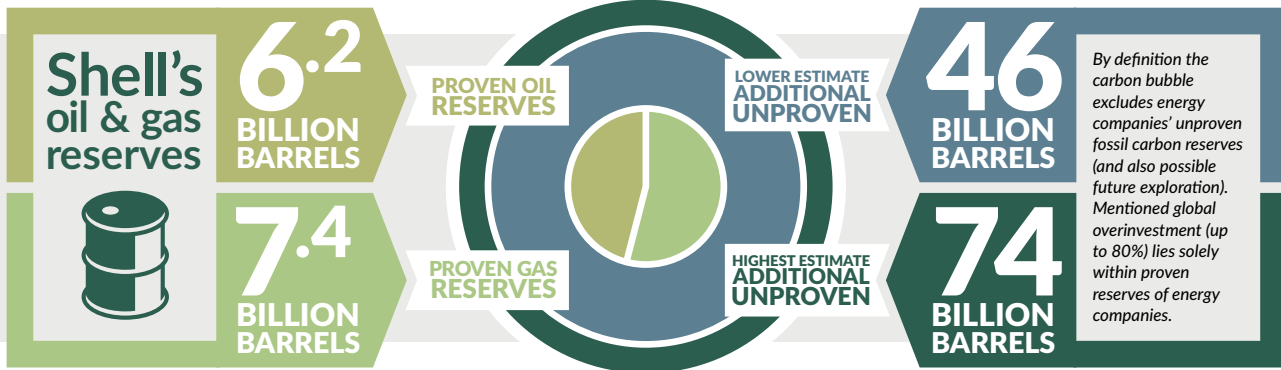


Global carbon bubble overvaluation of in national, private & public energy¹

OVER
\$1
TRILLION



Extra capital expenditure to extract 'unburnable carbon' proven reserves²



125+
KG
CO₂

CO₂ intensity Shell reserves

The carbon bubble is the financial overvaluation of proven carbon reserves that are classified as 'unburnable' - following from a limited remaining atmospheric carbon budget.

Therefore reserves that offer high energy for low CO₂ are to be favoured over more CO₂ intense reserves. CO₂ intensity follows from nature of carbon reserves and the energy input required to extract the reserves. 'Unconventional fossil reserves' (for instance: tar sand, deep see oil, shale gas) have relatively high CO₂ intensity, as expressed per reserve per barrel of oil equivalent. CO₂ intensity of shale gas (55 kg CO₂) is for instance 2.5 times that of conventional gas (22 kg CO₂). These high CO₂ intense reserves are therefore more likely to be classified as 'unburnable' and **not** an economically viable, high asset risk investment.



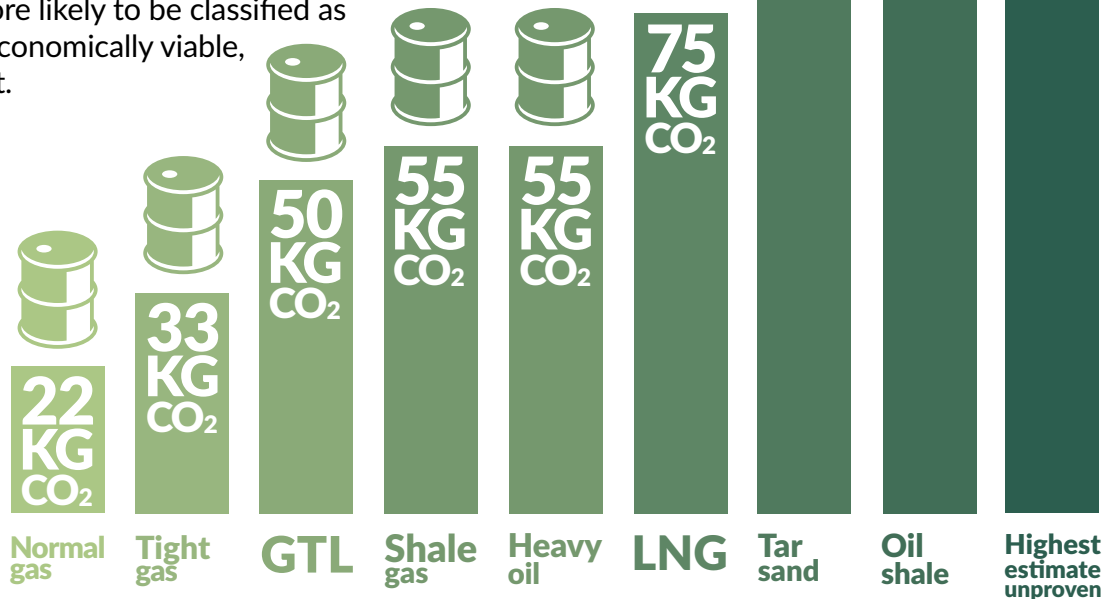
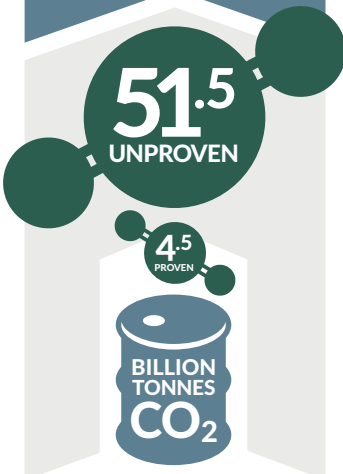
125
KG
CO₂

<112
KG
CO₂



75
KG
CO₂

SHELL'S FOSSIL CARBON RESERVE



CO₂ INTENSITY → CARBON RESERVE NATURE + EXTRACTION ENERGY

¹ Carbon Tracker Institute, 2013 ² Carbon Tracker Institute, 2014
Source: Shell's Carbon Bubble report - Milieudefensie/Friends of the Earth Netherlands, May 2014

