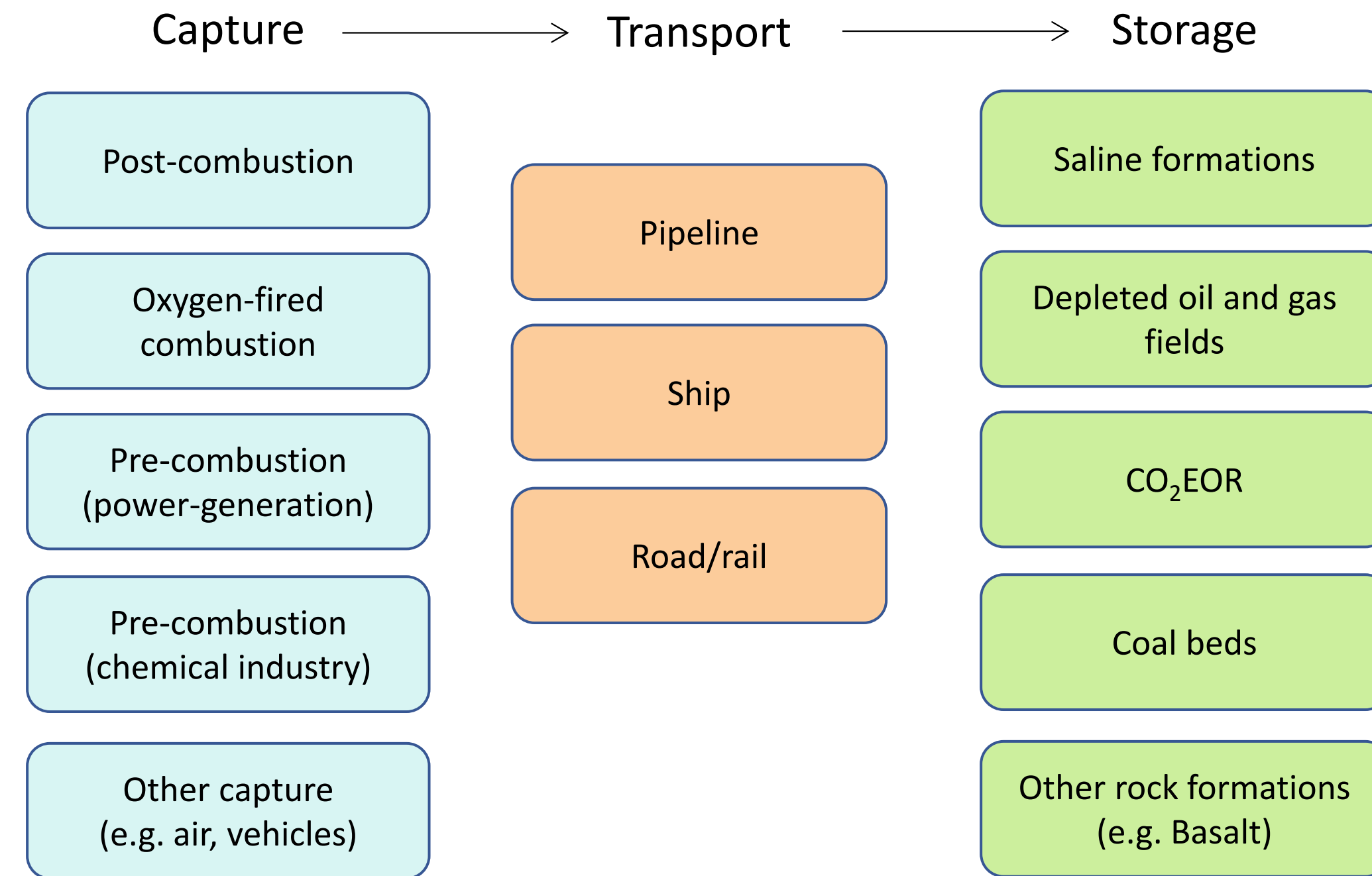


Why CCS?

- ▶ can't stop using fossil fuels over night
- ▶ renewable energy needed for long-term near net-zero
- ▶ 80% current energy is from fossil
- ▶ renewable energy is intermittent
- ▶ need pragmatic approach
 1. improved efficiency
 2. new renewables
 3. switch from coal to natural gas
 4. add nuclear to the mix
 5. deploy CCS



Arguments why CCS is vital

- reduce CO₂ power generation & industry
- faster energy transition
- need 10X increase by 2030 compared to current plans to meet Paris agreement

Needs to isolate CO₂ from atmosphere for few thousand years

Permanent storage difficult to ensure

Overview CCS

1. depleted O&G reservoirs
 - well understood, low pressure, infrastructure in place
2. part of enhanced oil recovery (EOR)
 - part of CCUS, economical
3. saline aquifers
 - largest available volume at sea
4. coal bed
 - not much volume
5. other
 - mineralization of basalt, caverns in salt

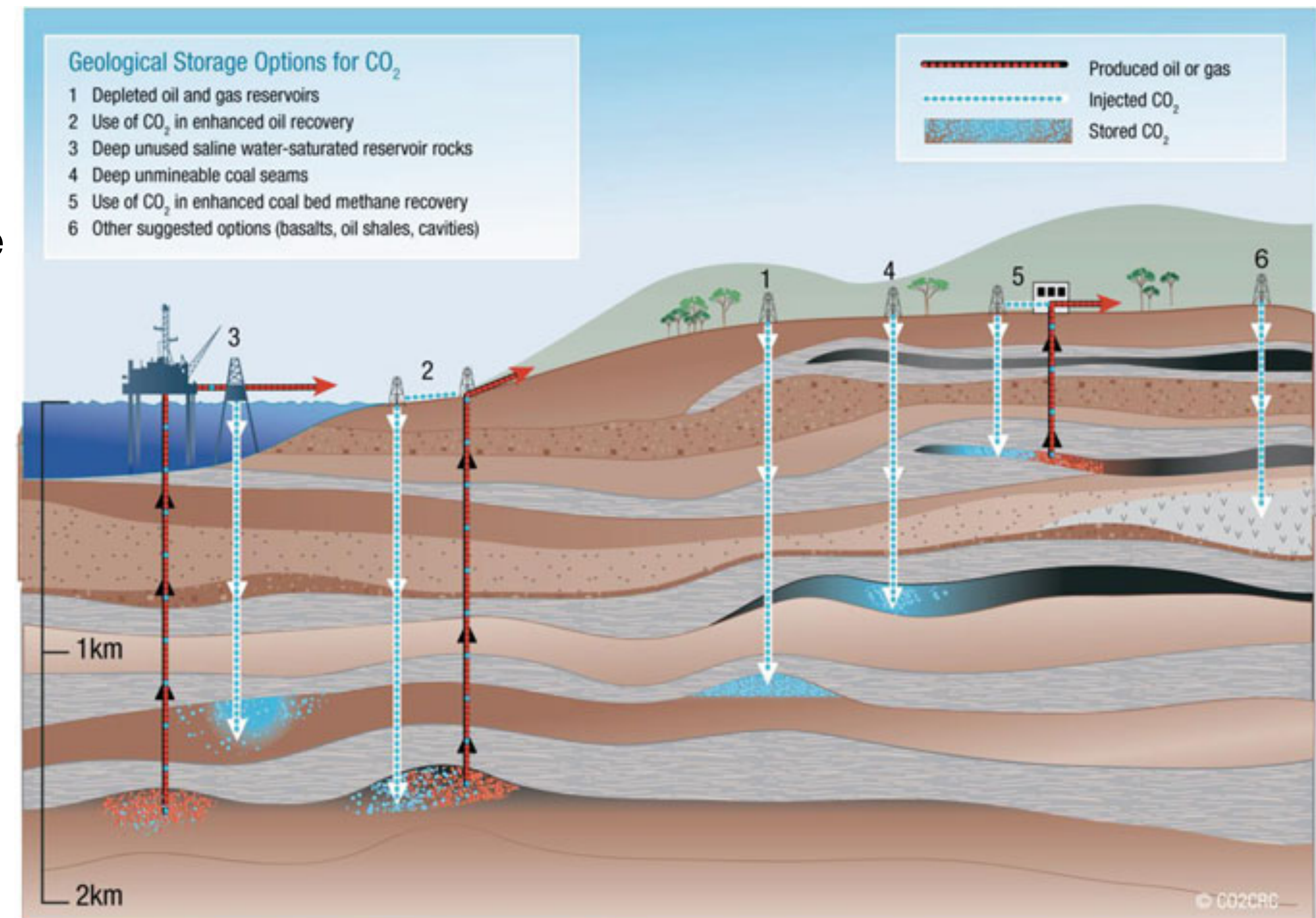


Fig. 1.5 Overview of geological storage options for CO₂ (©CO2CRC, image courtesy of CO2CRC Ltd)