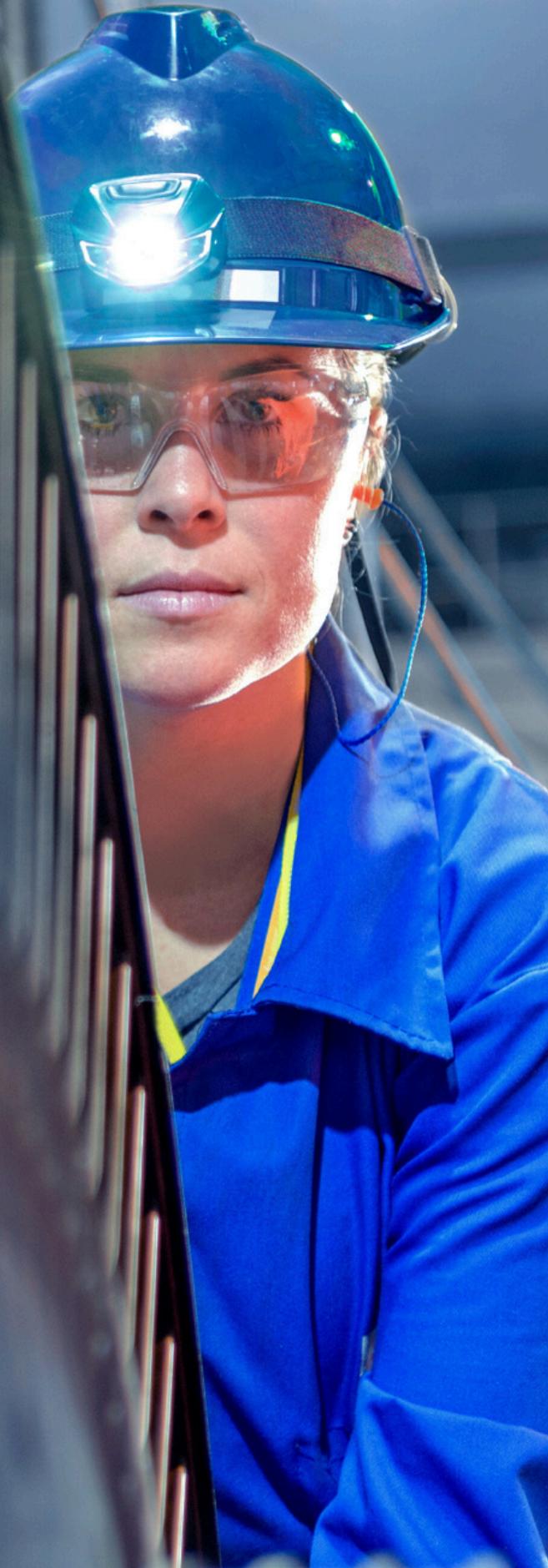


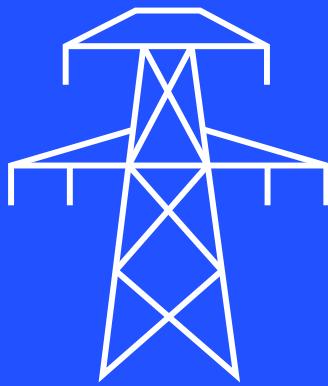
# 25

physical  
challenges to  
tackle to advance  
the energy  
transition



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Global Institute





# Power

1. Managing renewables variability
2. Scaling emerging power systems
3. Flexing power demand
4. Securing land for renewables
5. Connecting through grid expansion
6. Navigating nuclear and other clean firm energy



# Mobility

7. Driving BEVs beyond breakeven
8. Going the distance on BEV range
9. Loading up electric trucks
10. Charging up EVs
11. Refueling aviation and shipping



# Industry

12. Furnacing low-emissions steel
13. Cementing change for construction
14. Cracking the challenge of plastics
15. Synthesizing low-emissions ammonia
16. Heating other industries



# Buildings

17. Facing the cold with heat pumps

18. Bracing for winter peaks



# Raw materials

19. Unearthing critical minerals



# Hydrogen and other energy carriers

20. Harnessing hydrogen

21. Scaling hydrogen's infrastructure

22. Managing biofuels footprint



# Carbon and energy reduction

- 23. Expanding energy efficiency
- 24. Capturing point-source carbon
- 25. Capturing atmospheric carbon

# Want to know more about the physical realities of the energy transition?

Read the report:

[mck.co/physicaltransition](http://mck.co/physicaltransition)

