



PART 3

Read the text below and answer questions 27–40.

THE HUMAN DIMENSION: SOCIO-ECONOMIC HURDLES IN THE ENERGY TRANSITION

The energy transition is frequently narrated as a technical race: deploy variable renewables, electrify end uses, and modernise networks. This framing contains a technocratic fallacy. It implies that once engineers have demonstrated feasibility and economists have shown cost-competitiveness, adoption will proceed as an almost automatic diffusion of superior technology. In practice, many of the most consequential bottlenecks are social: they arise from how costs are allocated, how benefits are distributed, and how disruption is experienced. A power system can be technically “optimised” and yet politically paralysed if it lacks legitimacy, trust, and an acceptable distributive impact.

A persistent misconception is that the cheapest option necessarily wins. Even when a low-carbon technology has an attractive lifetime cost, households and firms still face up-front expense, uncertainty, and administrative friction. Heat pumps illustrate the problem: they may reduce bills over time, but they require capital, credible installers, and confidence that performance will match claims. In rental markets, split incentives are decisive: landlords pay for equipment while tenants receive most of the energy savings, so investments that are rational at the level of society can be irrational at the level of the contract. Low-income owners may also be “credit constrained”, unable to finance upgrades even when payback is clear. These barriers are not marginal; they can determine whether deployment is rapid or stalled.

Labour-market adjustment adds a further layer of complexity. Fossil-fuel regions—coal basins, refinery corridors, and supply-chain clusters—are not merely collections of jobs; they are communities organised around an economic identity and a fiscal base. A rapid contraction in these sectors can create geographically concentrated hardship even if national employment remains stable. For this reason, the language of a “just transition” has expanded beyond retraining rhetoric to include place-based investment, predictable timelines, and the replacement of local revenue streams that funded schools and services. Without credible pathways, decarbonisation can be experienced as abandonment rather than progress, and political opposition can harden accordingly.

Pricing policy is another flashpoint because it directly touches everyday living costs. Carbon pricing can accelerate decarbonisation by shifting relative prices, but its social acceptability depends on perceived fairness. If costs rise faster than wages, households may interpret policy as a regressive transfer, particularly when they lack practical



alternatives such as public transport or efficient housing. Governments often attempt to protect legitimacy by returning revenue through rebates or by shielding vulnerable consumers. Yet such measures can be administratively complex, and they are criticised from both directions: as inadequate by those facing hardship, or as wasteful by those who see compensation as diluting incentives. The sociological point is that pricing is never merely economic; it is a test of procedural justice and political consent.

Infrastructure development generates its own forms of conflict. Transmission lines, wind farms, substations, and new interconnectors may be essential for decarbonisation, but local communities frequently oppose them. This resistance is not always reducible to “not in my backyard” attitudes. Opposition often intensifies when residents feel excluded from decision-making, when compensation appears symbolic, or when benefits flow elsewhere while disruption remains local. The concept of a “social license to operate” captures this dynamic: projects can be legally permitted yet socially contested. If consultation is rushed or approval procedures seem opaque, critics can frame the transition as imposed rather than negotiated, turning planning into a proxy battle over recognition and power.

Equity concerns also appear in the diffusion of consumer technologies. Subsidies for rooftop solar, electric vehicles, and home batteries can accelerate adoption and reduce emissions, but they can also function as regressive subsidies if they disproportionately benefit households that already have capital and suitable housing. When poorer households contribute to subsidy schemes through taxes or electricity bills while receiving fewer direct benefits, support for the transition can erode. The problem is not that incentives are inherently misguided, but that design matters: targeted support, tenancy-compatible programmes, and fair financing structures are often required to prevent climate policy from widening socio-economic inequality.

Internationally, the socio-economic hurdles can be sharper still. Some countries face limited access to capital, weaker grid infrastructure, and urgent competing priorities such as health, education, and basic services. Others depend on fossil exports for public revenue, creating a fiscal exposure that complicates rapid structural change. In these contexts, calls for accelerated decarbonisation may be perceived as unfair unless accompanied by finance, institutional support, and technology transfer that respects national development goals. Importantly, such countries do not form a single bloc: constraints vary widely, and so do political strategies. The common denominator is that decarbonisation is inseparable from development pathways and geopolitical bargaining.

These frictions do not imply that social barriers are immutable. Policy can reduce up-front costs, spread risks, and align incentives; transition planning can provide clearer signals about what will change and when; and institutions can improve procedural justice so that



affected groups experience participation as real rather than symbolic. The decisive lesson is conceptual: durable progress requires treating the energy transition as a social project as much as a technological one—an exercise in legitimacy, distribution, and collective coordination, not only in engineering deployment.

Questions 27–31

Select the correct answer.

27 The passage suggests that many delays in the energy transition result mainly from

- A** a shortage of grid and storage technology that makes expansion technically impossible
- B** social decisions about costs, benefits and disruption, rather than engineering limits alone
- C** renewable resources being too unevenly distributed to support modern economies
- D** the absence of international climate agreements that would otherwise compel action

28 Why might a heat pump that reduces bills over time still not be installed by some households?

- A** The running costs are typically higher than those of fossil-fuel heating systems.
- B** The technology is unreliable unless the entire local grid is upgraded first.
- C** Up-front expense and constraints linked to renting or financing can block investment.
- D** Governments generally prohibit landlords from making changes to heating systems.

29 The author implies that public resistance to carbon-pricing policies is more likely when

- A** living costs rise more quickly than wages, creating a sense of unfair burden
- B** the policy is introduced only after renewables have reached a majority share of supply
- C** revenue is collected through taxes rather than through electricity bills
- D** governments focus on long-term emissions targets instead of short-term measures

30 According to the passage, opposition to new infrastructure is sometimes driven by

- A** a lack of information about how transmission and substations function
- B** a belief that decarbonisation can be achieved without expanding the network
- C** concerns that the projects will immediately raise national electricity prices
- D** perceptions that communities are excluded and that benefits and disruption are unevenly shared

31 The passage suggests subsidies for household technologies can reduce support for the transition if they



- A** are delivered as tax rebates rather than as grants at the point of purchase
- B** mainly benefit higher-income groups while costs are shared more widely
- C** prioritise rooftop solar instead of measures such as insulation and heat pumps
- D** are offered for too long, leading to lower uptake over time

Questions 32–36

Choose **TRUE** if the statement agrees with the information given in the text, choose **FALSE** if the statement contradicts the information, or choose **NOT GIVEN** if there is no information on this.

- 32** The passage suggests that the cheapest option automatically succeeds even when households face barriers to adopting it.
- 33** The passage suggests that the decline of fossil industries can create hardship concentrated in particular regions.
- 34** The passage suggests that rushed consultation can make infrastructure projects appear imposed rather than negotiated.
- 35** The passage suggests subsidies may sometimes generate perceptions of unfairness.
- 36** The passage states that fossil-exporting countries receive the largest share of international technology-transfer funding.

Questions 37–40

Complete the sentences below. Choose **NO MORE THAN TWO WORDS** from the text for each answer.

- 37** To offset higher carbon costs, governments may return revenue through
- 38** Resistance can grow if consultation is rushed or approval procedures seem
- 39** Calls for rapid decarbonisation may be seen as unfair unless accompanied by finance, institutional support and
- 40** The passage concludes that lasting progress requires viewing the transition as a as well as a technological one.

Answer Key

27. B

28. C

29. A



30. D

31. B

32. FALSE

33. TRUE

34. TRUE

35. TRUE

36. NOT GIVEN

37. rebates

38. opaque

39. technology transfer

40. social project