



BROWN EQUITABLE CLIMATE FUTURES

Towards a just, resilient transition



Engineering a Just Transition: Institutions Matter

Tom Sgouros, cast of thousands

24 September 2026, EC4

Acknowledgements



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The problem(s)?



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- ▶ Middle of 2-year project. Have some findings to share, and some thoughts about policies to address them.

Consider fairness



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- ▶ Because it's the right thing to do.

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- ▶ Because the only way to get a complicated public policy proposal through the many legislative and executive veto points is to make it popular.

Our approach



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Our approach



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- ▶ Talk to people.
- ▶ Divide the effort into buildings — mainly residential — and the people who work on them and fuel them.

- ▶ Too ignorant to create a multiple-choice survey.
- ▶ 81 survey responses, 56 participants in five focus groups, 38 one-on-one interviews with homeowners, landlords, and tenants. Over a hundred subjects total.
- ▶ Not really enough to be representative, but we learned things.

Recurring Themes



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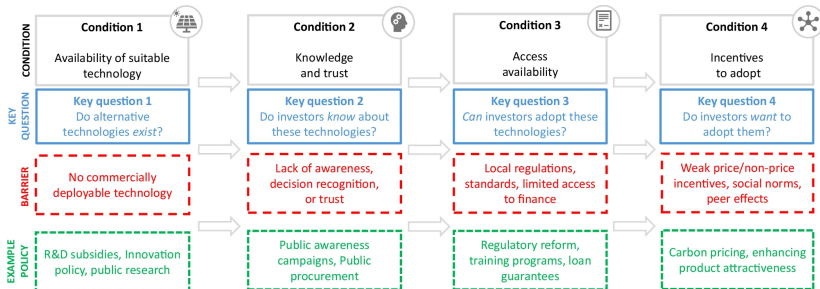
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- ▶ Information — Access and reliability.
- ▶ Cost — Incentives not relevant or not enough.
- ▶ Timing — Term mismatch and moment-of-need.
- ▶ Renters and landlords — Misalignment of interests.
- ▶ Condos — No relevant incentives.

- ▶ A *lot* written out there about clean energy adoption. Prospect theory, behavioral economics.
- ▶ The “value-action gap”, the “knowledge action gap”, or the “attitude-behavior gap”. Mostly intrinsic factors, like progressive attitudes, propensity for risk-taking,

- ▶ A *lot* written out there about clean energy adoption. Prospect theory, behavioral economics.
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- ▶ Framework seemed inadequate to account for what we heard from our participants. Extrinsic factors lumped: “peer effects”, “hassle factor.”

Another perspective



From Pollitt and Petruskaite, “A Policy Framework for Clean Energy Technology Adoption”, npj Clean Energy, 2026

Condition 1: Availability of Technology



- ▶ Technology is mostly moving where it needs to be, but has it arrived?
- ▶ Hydronic heating. 350K houses with forced hot water or steam in RI. Replacements, radiators, thermostats.
- ▶ Geothermal wells are 10x the cost of water wells. Should be less expensive, but limited local demand at present.
- ▶ Innovation is still possible and still required. How about a lab?

Condition 2: Knowledge and Trust



- ▶ Trust is a common complaint among prospective adopters, largely that the decision terrain is too wide and complex.
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- ▶ RISE.

Condition 3: Access



- ▶ Availability — HVAC engineering expertise. Also, networked geothermal, community solar, bundled conversions.
- ▶ Finance — Can't rely on Federal gov't. Energy service finance, can work bundled.
- ▶ Timing — Both being ready when people need it, but also finding ways to address term mismatch.
- ▶ Workforce issues — Need more people. Tons of work to do.

Condition 4: Opinions and Incentives



- ▶ *After* availability, knowledge and trust, access.
- ▶ Existing incentives are inadequate to the requirement, or the demand.
- ▶ Efficiency and renewables can be financed because they make (or save) money. Electrification not so much, because the savings are more modest.

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- ▶ Scale, activity.
- ▶ Whose job is this?

Possible Solutions



- ▶ Energy guides/counselors/engineers/docents.
- ▶ Trusted organizations.
- ▶ Developing technology — and availability.
- ▶ Need people — and businesses.
- ▶ Cost of finance.

More Possible Solutions



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- ▶ Bundling energy efficiency, heat conversions, and renewables into a collection where you can start to get economies of scale in labor.

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- ▶ Lots of other stuff: virtual power plants, small-scale commercial solar, batteries, heat storage.



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“The key is not technology; it is institutions. Once the rules are fair and predictable, the system builds itself.”

END

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