Instructor Guide — Class Exercise on Market Failures, Information Problems, and Behavioral Anomalies

October 19, 2025

Learning Goals (for instructor reference)

Students should be able to: - Correctly diagnose at least **two sources of market failure** - Identify **at least one behavioral anomaly** affecting decisions - Align **policy tools** to the **four pillars** of policy design - Reflect on **limitations of pure information interventions**

Exercise Part 1 — Diagnose the Market Failure

Scenario (to display to students):

A rental building from the 1980s has an outdated heating system. - The **landlord** pays for installation but **tenants** pay heating bills. - Most tenants **know little** about heating efficiency or operating costs. - The building **lacks submetering** — heating costs are split evenly in rent.

Task for students: Identify two market failures and justify briefly.

Instructor Note — Expected Answers

Likely Market Failure	Justification
Principal-Agent Problem / Split Incentive	Decision-maker
	(landlord) does not bear
	energy cost, so
	underinvests in
	efficiency.
Information Asymmetry / Imperfect Information	Tenants cannot observe
·	true efficiency or
	operating cost difference.
Externality (optional mention)	Landlord's decision
	imposes external costs
	(higher energy
	use/emissions) on
	tenants and society.

Exercise Part 2 — Behavioral Lens

Task for students: Identify which behavioral anomaly may prevent efficiency upgrades.

Instructor Note — Expected Behavioral Frictions

ehavioral Category Manifestation	
Bounded Rationality	Tenants do not process long-term efficiency info (lifecycle cost).
Present Bias (Bounded Willpower)	Tenants/owners overweight upfront cost relative to future savings.
Status Quo Bias	"Old system works fine" \rightarrow default persistence.
Social Norms (bonus)	No visible norm or peer pressure to retrofit \rightarrow low adoption.

Exercise Part 3 — Policy Matching Table

Pillar	Student fills with policy tool recommendation

Instructor Reference Table

Pillar	Example Policy Response
Incentives	On-bill financing, retrofit subsidies, carbon/energy price
Information	Energy performance certificates, lifecycle cost labels, public audits
Institutions	Mandatory energy disclosure, MEPS for rentals, green lease clauses, submetering regulation
Social Norms	Publishing building energy ratings, neighborhood retrofit challenges, public recognition campaigns

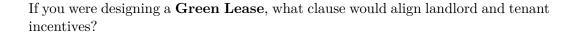
Exercise Part 4 — Reflection

Why might information	campaigns	alone	be	insufficie	nt ?
(Students write 2–3 lines.)					

Expected Insight

- Information alone does not solve split incentives landlord still lacks payoff motive.
- Behavioral frictions (present bias, status quo bias) mean information action.
- Institutional alignment (contracts, metering) needed to change payoff structure.

Group Discussion Prompt (Optional)



Instructor Prompt Guidance

Encourage clauses like: - Cost-sharing rule: "Landlord installs efficient system; tenant agrees to slight rent premium." - Energy savings clause: "Rent adjustment linked to verified energy savings." - Submetering requirement: "Energy billing based on individual usage."

Debrief Question (End of Session)

Which pillar (/ /) is **most often ignored** in energy policy — and what happens when it's missing?

Key Teaching Takeaway

• Most policy focuses on **incentives** and **information**, but **institutions** (rules, contracts) and **norms** are crucial to make change **stick** and overcome behavioral and principal—agent frictions.

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