

EXECUTIVE SUMMARY (FULL PAPER available on request)

Transforming Utility Cooperatives for the Future: Rent, Deliberation, and Capability in Democratic Infrastructure

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Argument and Framework

This paper argues that utility cooperatives are not simply an alternative ownership form sitting between the state and the private corporation, but a qualitatively distinct institutional synthesis — one that integrates economic production, democratic governance, and social purpose in ways neither state enterprise nor investor-owned utility is designed to achieve. To make this case, the paper builds a six-lens comparative framework:

- (1) Henry George’s theory of economic rent, which asks who captures the surplus generated by infrastructure monopoly;
- (2) Elinor Ostrom’s design principles for self-governing common-pool institutions;
- (3) Douglass North’s account of institutions as the rules that structure economic performance;
- (4) Oliver Williamson’s transaction-cost economics, which explains why asset-specific infrastructure investment requires governance safeguards against opportunism;
- (5) Jürgen Habermas’s theory of communicative action, applied to cooperative deliberation as a legitimacy-generating process; and
- (6) Amartya Sen’s capability approach, which reframes infrastructure access as the expansion or restriction of substantive human freedom.

The central claim running through all six lenses is that utilities must be evaluated not only by who owns them, but by how their institutional structures allocate rent, organize transaction costs, confer legitimacy, and expand or restrict capability.

Seven Comparative Cases

The framework is tested against seven cases spanning five continents, three utility sectors (telecommunications, electricity, and water), and eight centuries of institutional history

- (1) **Rural telecommunications** and
- (2) **Rural electric cooperatives in the United States** illustrate the Georgist logic of serving an entire territory rather than only its most profitable segments, financed historically through New Deal-era Rural Electrification Administration lending.
- (3) **Som Energia**, a Spanish renewable-energy cooperative, and
- (4) **the Tribunal de las Aguas de Valencia** — a water tribunal that has convened weekly at Valencia Cathedral since its procedures were codified in 1435 and that Ostrom herself analyzed as an exemplar of self-governance — span the full temporal range of cooperative governance, with a 2015 empirical re-test confirming the durability of the Huerta’s design principles even under contemporary EU Water Framework Directive and drought pressures.

- (5) **The Australian cooperative energy and water sector** — Hepburn Energy’s community wind farm, Haystacks Solar Garden’s democratized rooftop-solar access, Coleambally Irrigation Cooperative Limited and Murrumbidgee Irrigation Limited’s farmer-owned water infrastructure, and Cooperative Power Australia’s non-distributing wholesale electricity model — offers a mature, institutionally diverse demonstration that cooperative governance can sustain Georgist efficiency, Ostromian self-governance, and Sen-ian capability expansion at scale.
- (6) **New Zealand’s farmer-owned irrigation companies** (Central Plains Water, Opuha, MHV Water) and its live “Local Water Done Well” municipal reform show the same institutional choices remaining active sites of policy experimentation today.
- (7) **Finally, the 1997 privatization of the Metropolitan Waterworks and Sewerage System (MWSS) in Metro Manila** documents the cascading distributional and governance failures — rates rising up to 700 percent, a 40.92 percent realized rate of return against a 12 percent charter ceiling, and regulatory capture — that follow when a monopoly utility is restructured to serve investor returns rather than user welfare.

Empirical Evidence on Capital-Cost Pricing

- A dedicated empirical section establishes, rather than merely asserts, the paper’s core theoretical distinction between legitimate cost recovery and rent extraction. United States electric cooperatives are required under REA Bulletin 112-2 to maintain a Times Interest Earned Ratio of at least 1.5 — rates set, by rule, above the level needed to cover operating and marginal costs alone, with the resulting margin dedicated to debt service and capital investment.
- In the Murrumbidgee Irrigation Area, Murrumbidgee Irrigation Limited’s five-year capital-renewal cost-matching policy and Coleambally Irrigation’s Sinking Fund Levy and renewals annuity achieve the same result through different instruments, while Australian regulatory doctrine — the National Water Initiative’s upper-bound and lower-bound pricing principles, successive Productivity Commission National Water Reform inquiries, and the ACCC’s own definitions — confirms that average-cost, above-marginal-cost pricing for capital recovery is settled national policy rather than an idiosyncrasy of any single irrigation entity.
- A December 2024 Brookings Institution review of state water-utility financing supplies the U.S. policy backdrop: the nation needs an estimated \$744 billion over the next twenty years for drinking-water and wastewater infrastructure against roughly \$58 billion in federal infrastructure-law funding, while 12.1 to 19.2 million households already lack access to affordable water service.
- Together, this evidence shows that pricing above short-run marginal cost is a structural feature of capital-intensive natural-monopoly infrastructure under any ownership form — fully consistent with efficient second-best (Ramsey) pricing under a revenue constraint — and is analytically distinct from Georgist rent extraction.
- What distinguishes the two is the destination of the resulting surplus: retained as member equity and applied transparently to capital renewal in the cooperative cases, or extracted as investor return in excess of contractual entitlement, as in the Manila concessions.

Policy Contribution: Democratic Capitalization

Building on this distinction, the paper's original policy contribution is the concept of "democratic capitalization": rather than treating a mandatory capital-investment surcharge purely as a consumer cost passed through in tariffs, a subscriber-owned cooperative can credit that surcharge to each member's capital account, converting a cost burden into an ownership stake that accumulates in proportion to use.

The Australian cases — Coleambally's tradeable delivery entitlements, Haystacks Solar Garden's plot memberships, and Cooperative Power Australia's reinvestment of surplus into community renewable projects — demonstrate that this is already an operational practice, not merely a theoretical proposal.

Democratic capitalization reframes the politics of tariff adjustment: instead of asking a passive consumer base to absorb higher costs for the benefit of external capital, it invites an active membership to co-finance a commonly owned asset, reducing the agency costs and accountability failures that the MWSS case documents and offering a concrete instrument for the global remunicipalization movement.

Conclusion

Utility cooperatives emerge from this analysis as future-oriented democratic infrastructures that reconcile economic viability with social purpose, align ownership with use, and embed governance in the membership rather than in the preferences of external capital.

The paper's seven cases and its empirical evidence on capital-cost pricing jointly establish that this is not an aspirational claim but an institutional form already operating, at scale, across telecommunications, electricity, and water sectors on five continents — and that democratic capitalization offers a practical mechanism for extending it to the mandatory infrastructure investment challenges utilities everywhere now face.

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