

Building Decarbonization Workforce Needs and Recommendations

Analysis of 100% building decarbonization goal in California



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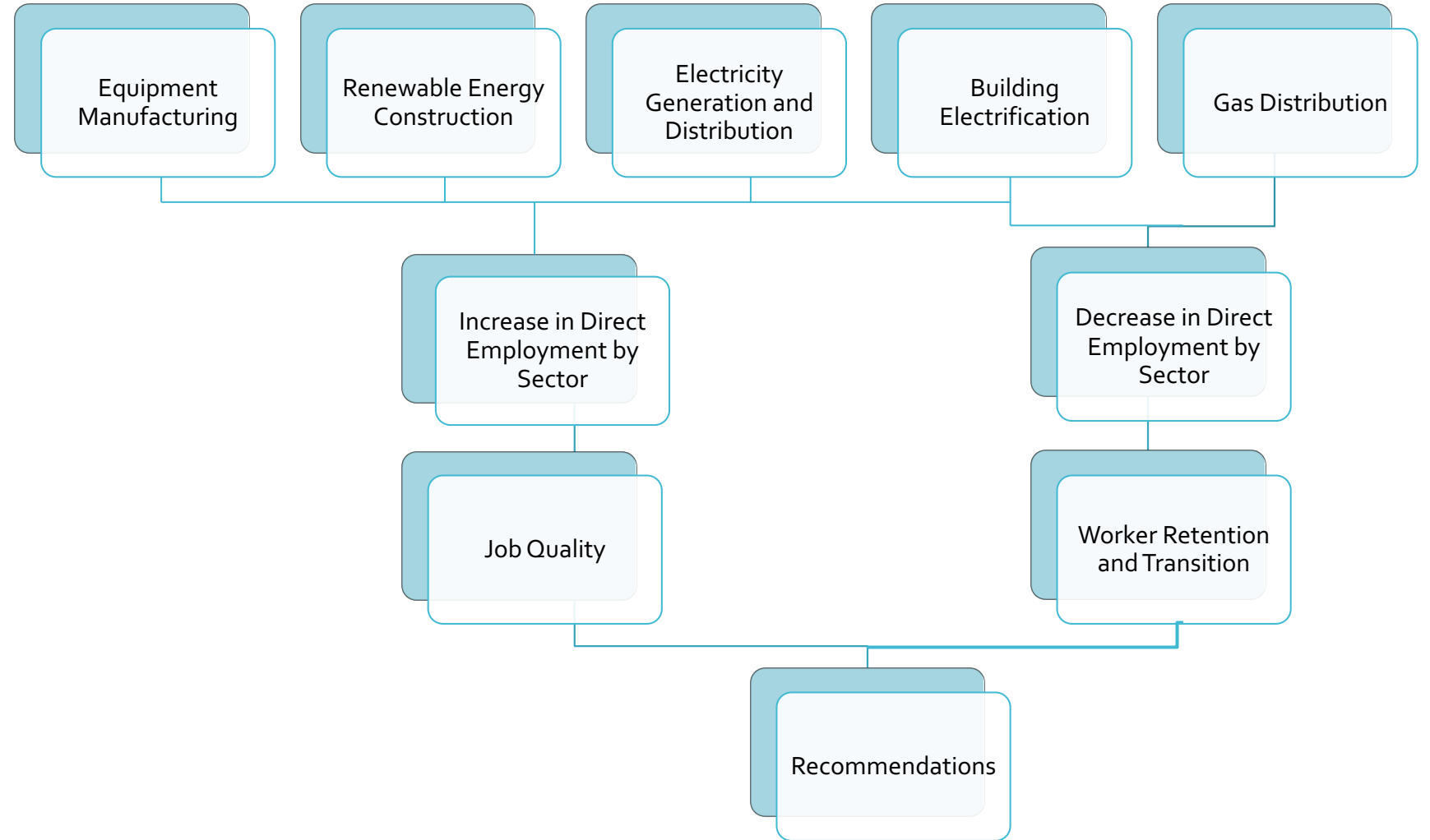
I. Market Analysis

II. Industries Affected

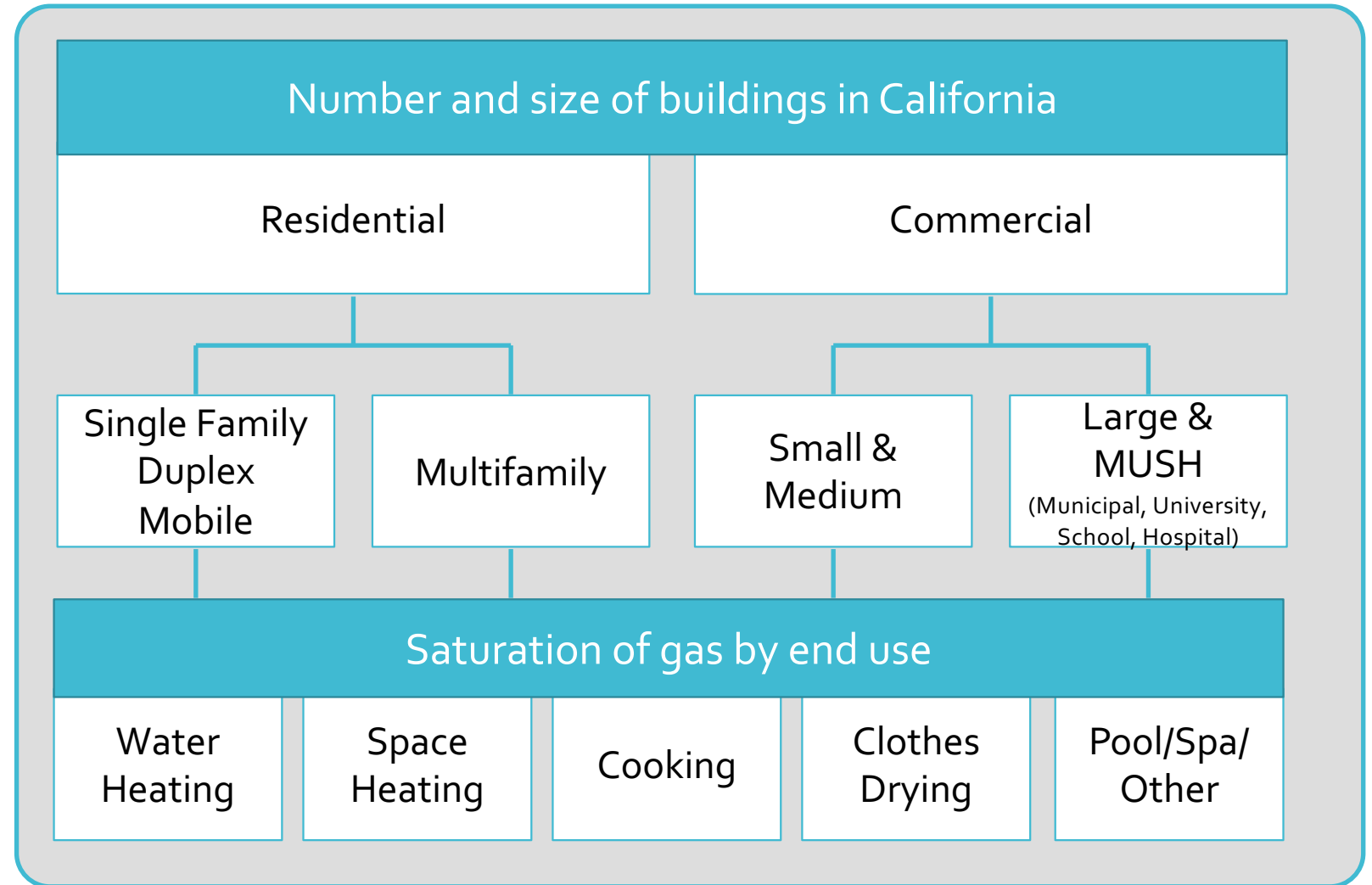
III. Estimated Impact

IV. Distribution of Impact

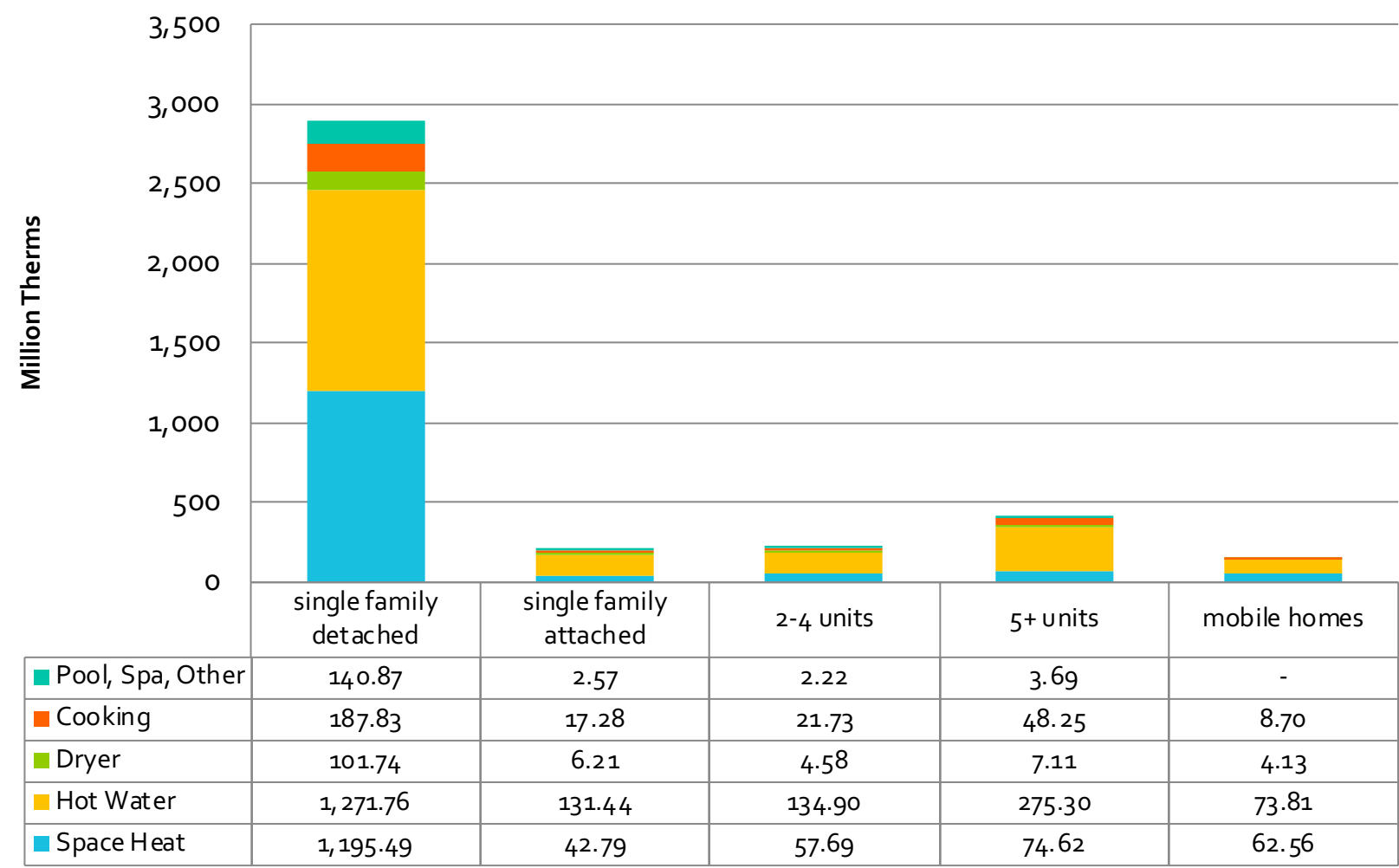
V. Recommendations



Building Market Analysis



Residential Gas Use by End Use



Building Retrofits and Manufacturing

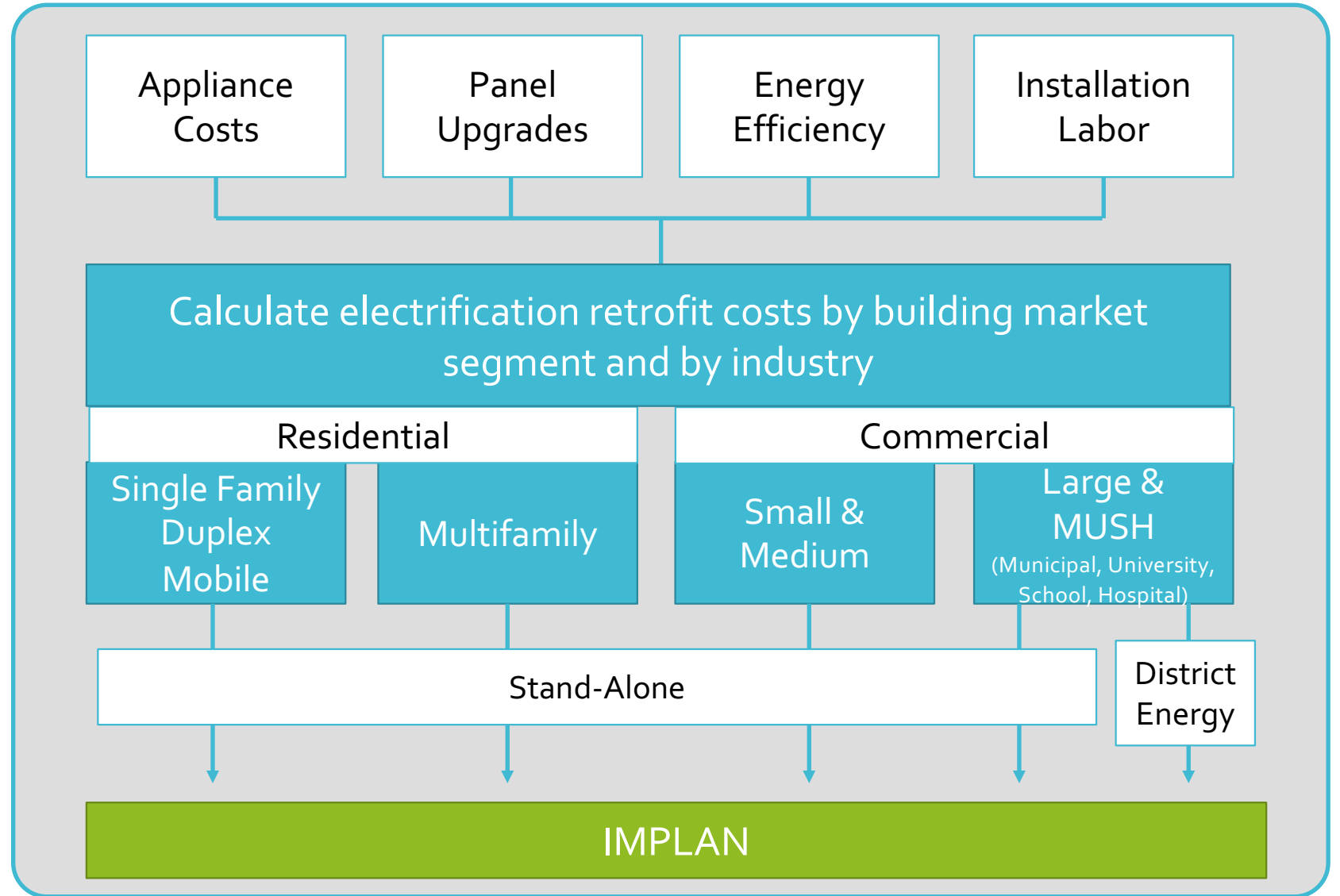


Photo Credit: EESI.org

Photo credit: AssemblyMag.com



Estimate Investment Required



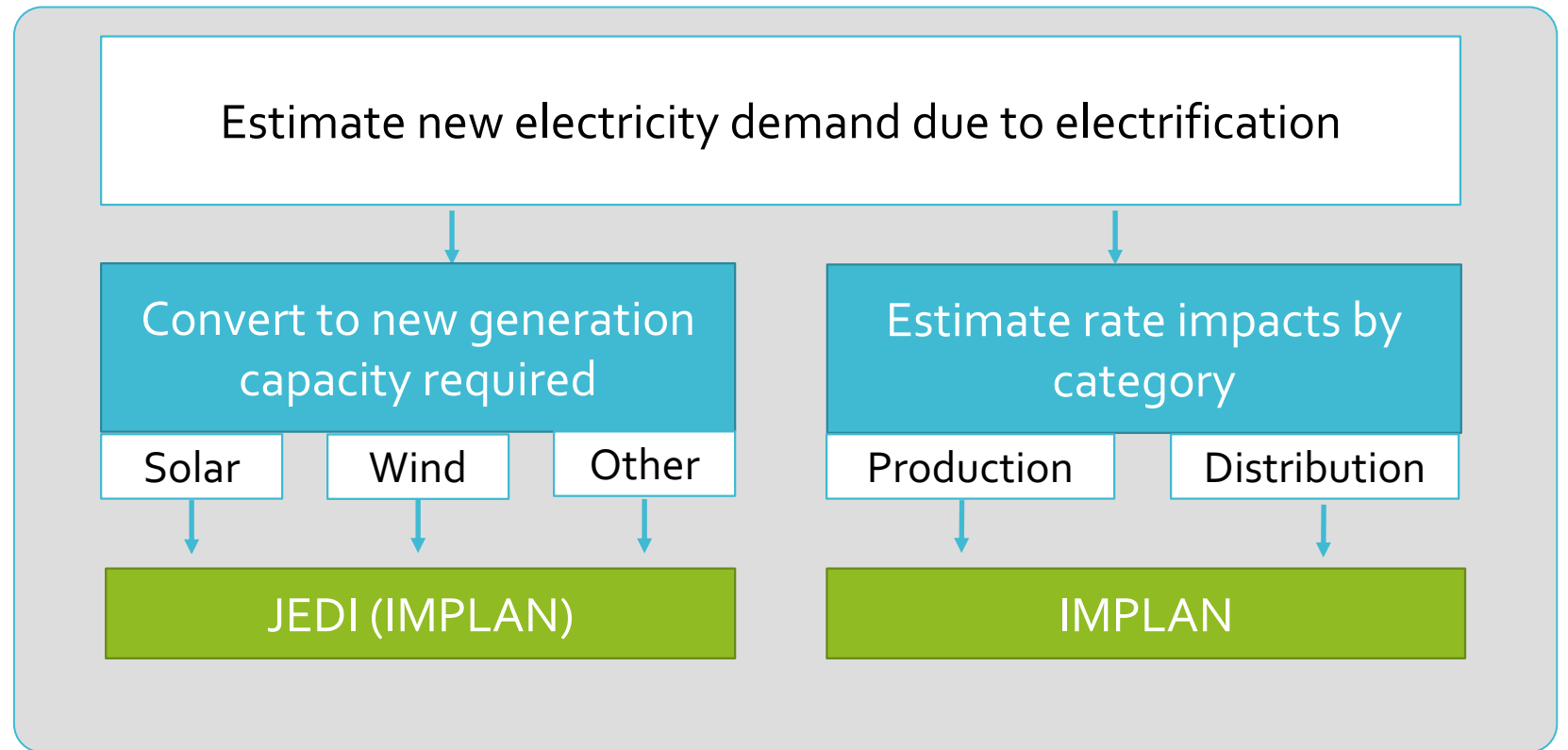
Electricity Generation and Distribution

Photo credit: Energy Institute at Haas



Photo credit: Locus Energy

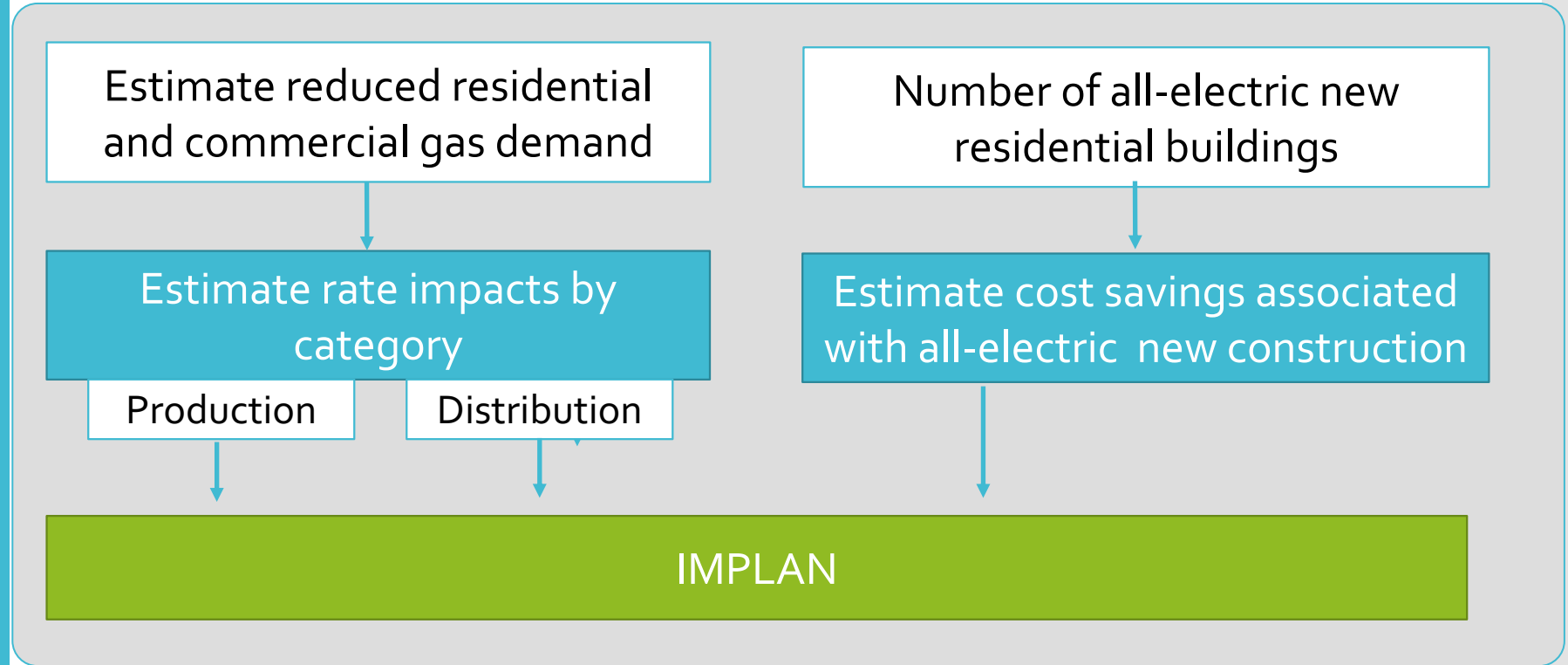
Estimate Increase in Demand for Electricity



Gas Job Loss

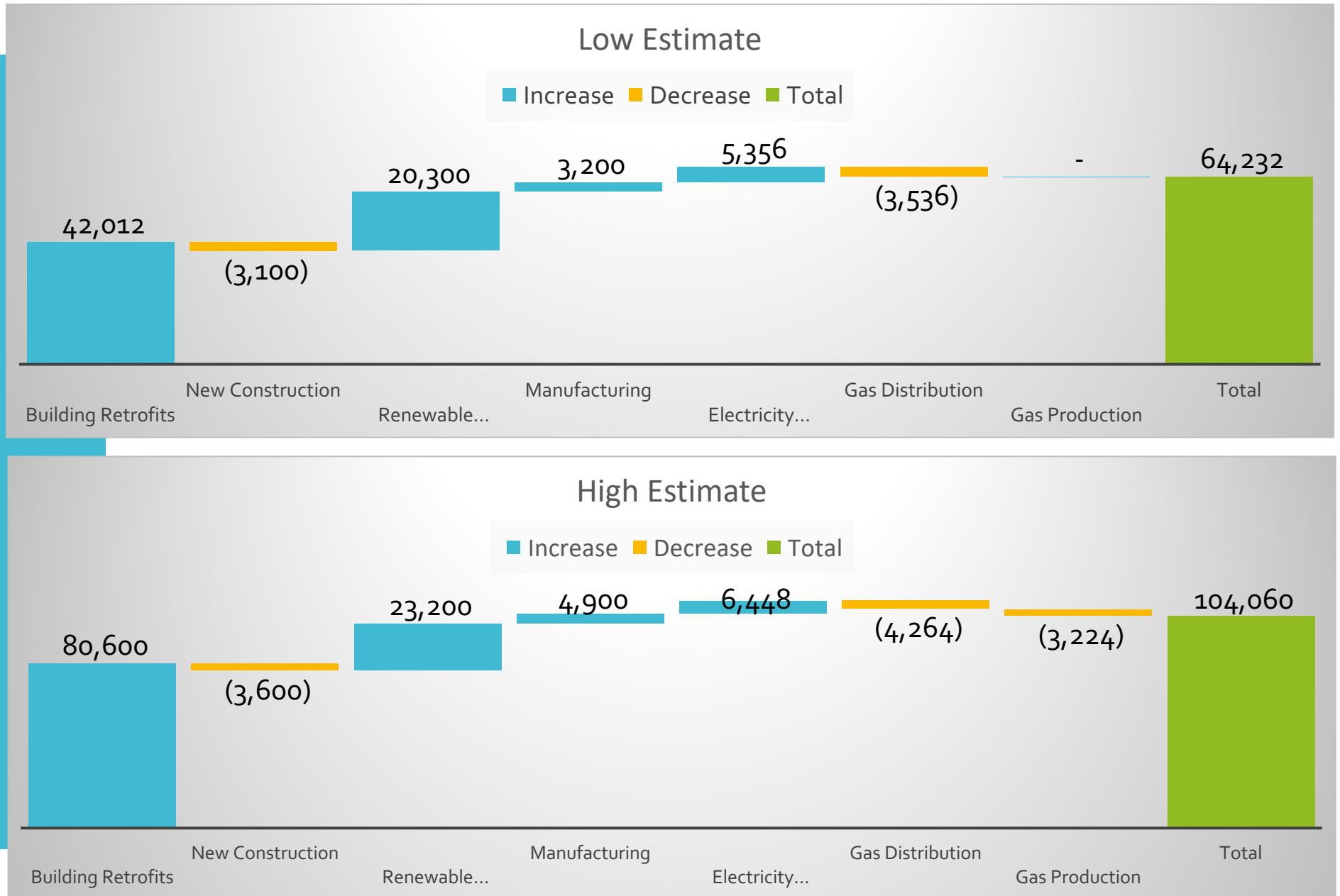


Estimate Reduction in Demand for Gas

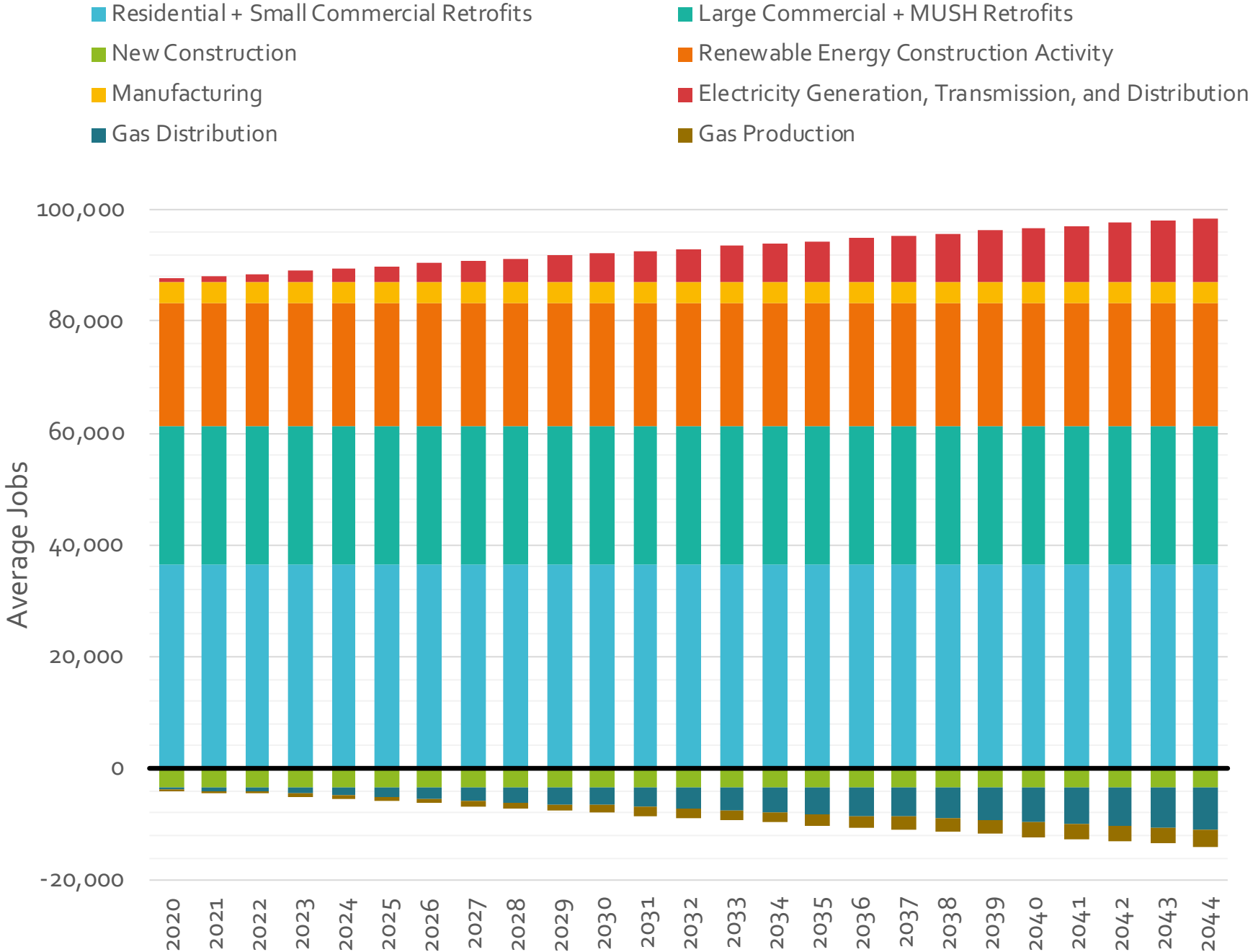


Workforce Needs

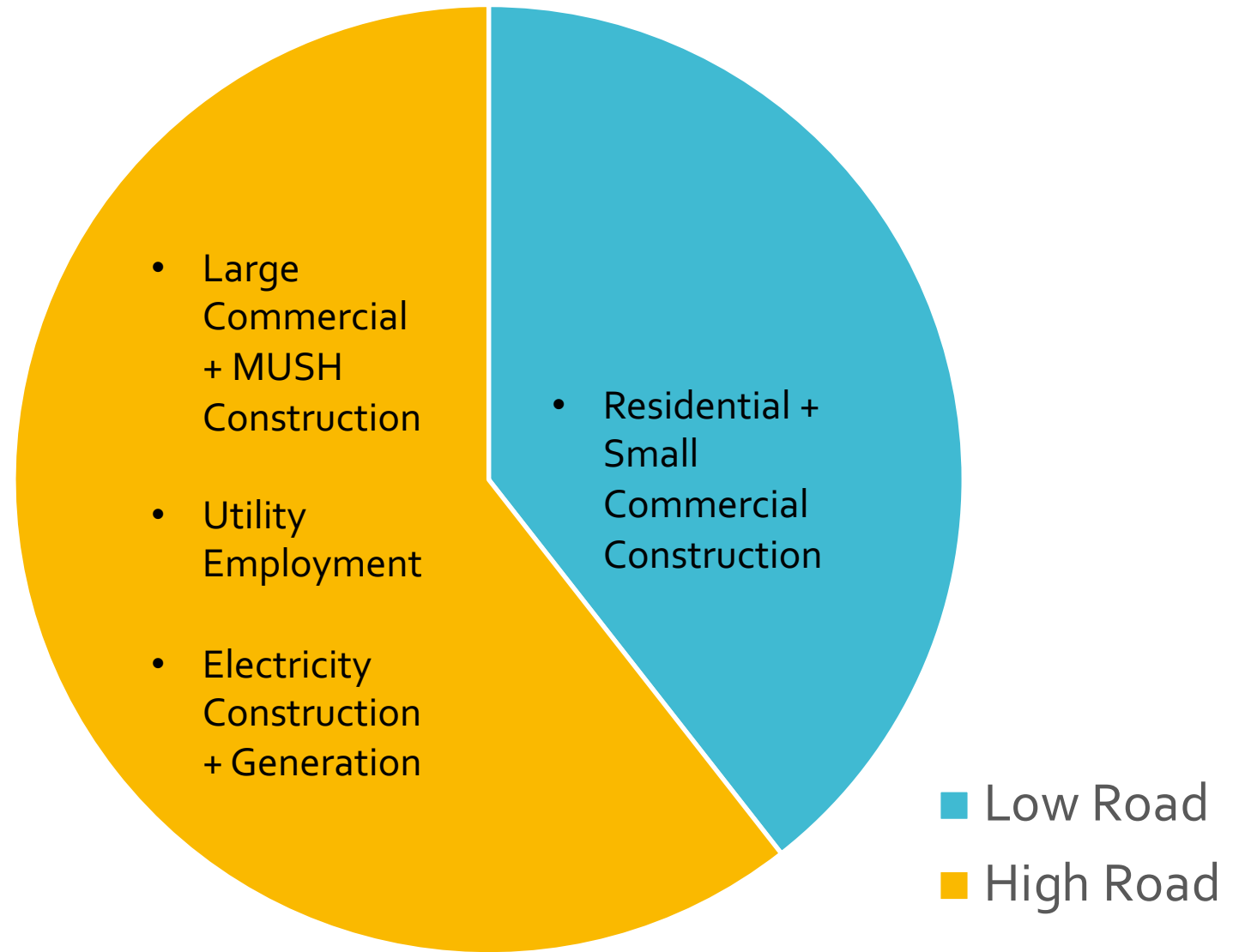
64,000 –
104,000 per
year



Estimated Workforce Needs by Year (100% building electrification by 2045)



Distribution of Jobs by Job Quality



Job Quality

High Road

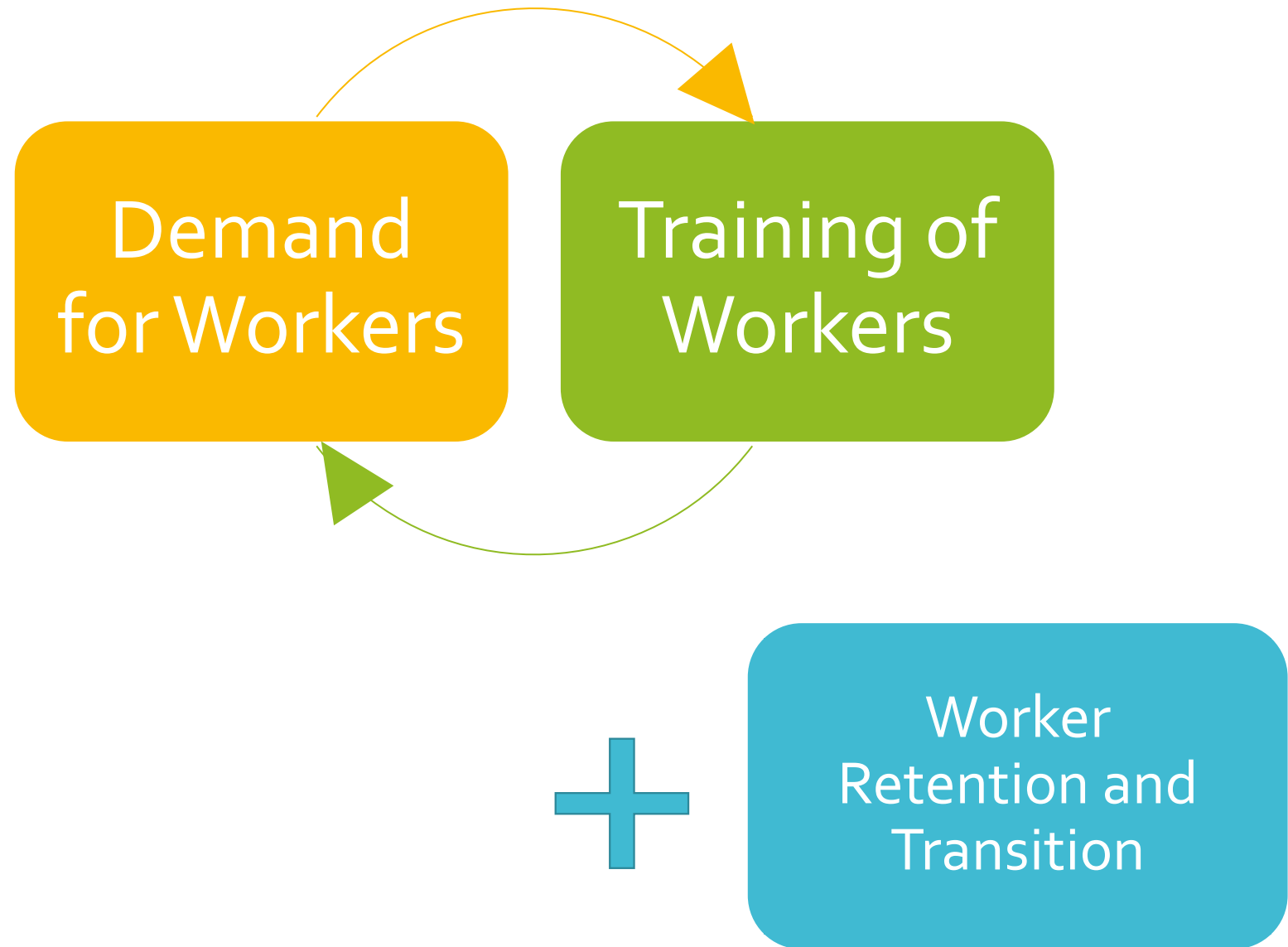
- Competition driven by skill, performance, qualifications
- Higher paying jobs
- More skilled workforce
- Higher compliance
- Career ladders



Low Road

- Competition driven by cost primarily
- Lower paying jobs
- Less skilled workforce
- More frequent labor law and code violations
- Low barriers to entry/High turnover

High-Road Workforce Development Recommendations



Recommendations

Demand

1. Engage with the local building trades council
2. Lead with M.U.S.H.
3. Focus on aggregated community-scale efforts
4. Condition incentives and rebates on skill standards
5. Vet contractors based on qualifications and worker skill
6. Explore district energy pathways to building decarbonization

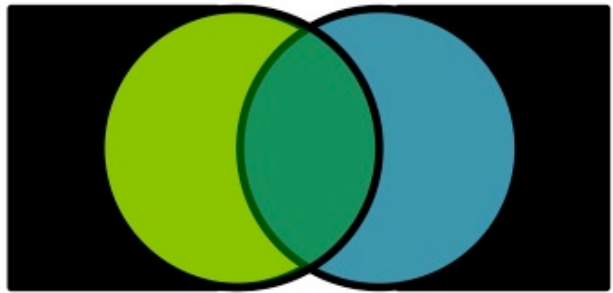
Supply

7. Focus training on stackable credentials available for workers (rather than contractors)
8. Support workforce partnerships aimed at increasing access to career-track jobs

Transition

9. Support a planned and orderly transition
10. Support a fund for worker retention and transition assistance

INCLUSIVE ECONOMICS



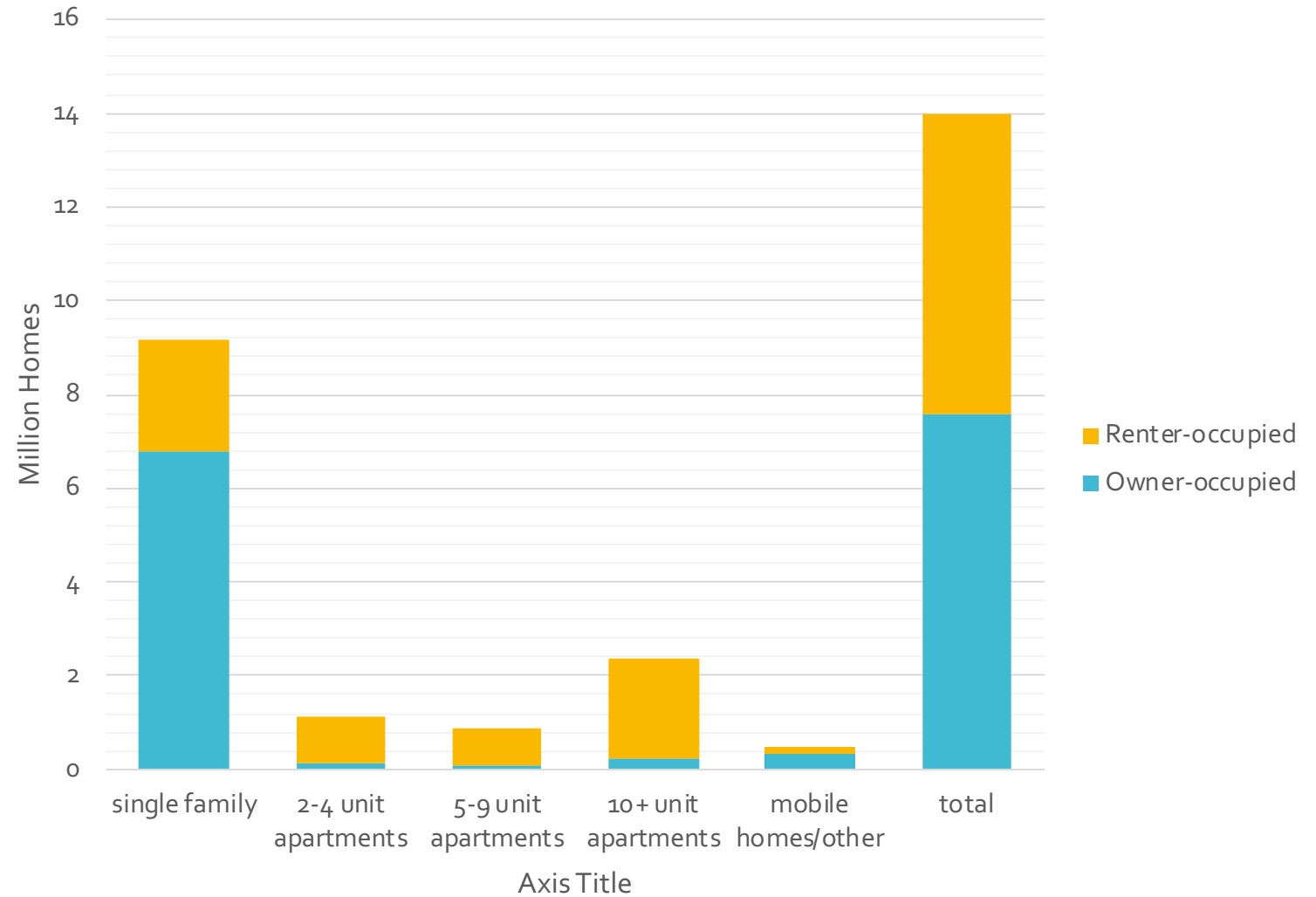
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Photo credit: HR Power Engineers

Extra Slides

Distribution by Owner or Renter Occupied



Commercial Buildings by Floor Space

