

EESE Board Goals Work Group Goals and Targets for the Building Sector

**EESE Board Meeting
12 March 2010**

EESE Board Goals Work Group

➤ Group's Charge:

- Identify the key results-oriented actions and corresponding milestones, that if successfully implemented, will achieve the EESE Board's Vision 2025.
- Develop an “elevator speech” version of the vision.

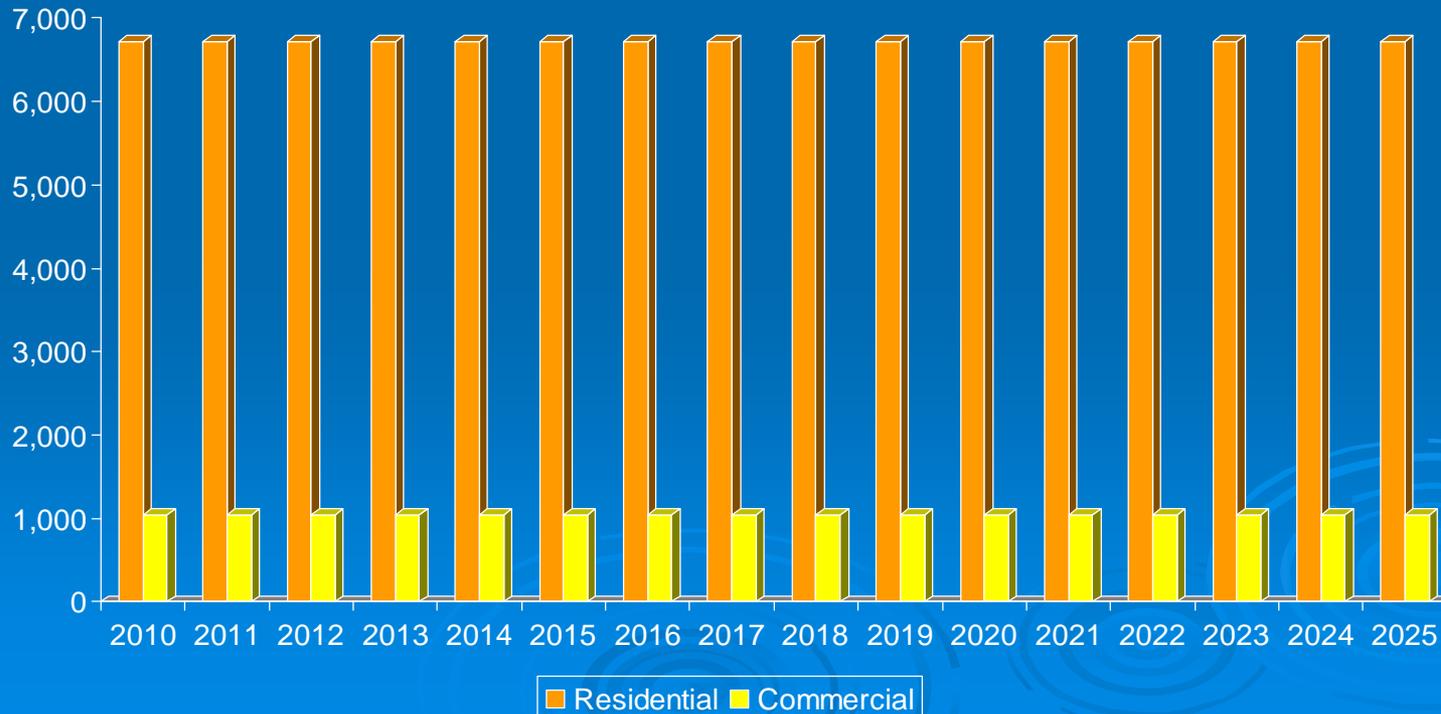
What We Need To Do – Buildings Sector

1. By 2025, construct all new residential and commercial buildings to use zero net energy (*or emissions*) (RCI 1.1)
2. Reduce energy consumption (*or emissions*) by 60% in all existing homes (RCI 1.2)
3. Reduce energy consumption (*or emissions*) in existing commercial, industrial, and municipal buildings by 50% (RCI 1.3)

What We Need To Do – New Residential & Commercial Construction to Use Net Zero Energy or Emissions (RCI 1.1)

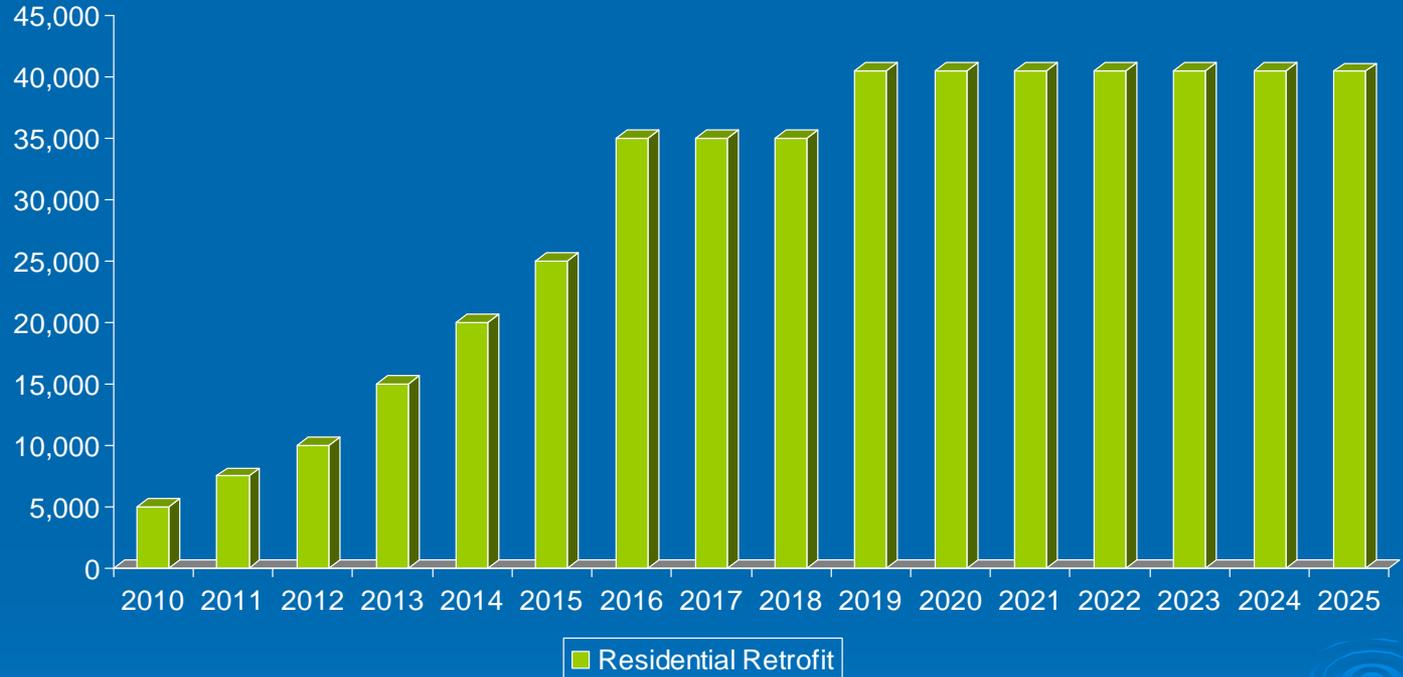
| | Residential | Commercial |
|---------------|-------------|------------|
| New Buildings | 4,153 | 837 |
| Replacements | 2,560 | 210 |
| Total | 6,713 | 1,047 |

| Years | Efficiency Levels |
|-------------|-------------------|
| 2010 - 2014 | 30% |
| 2015 - 2019 | 70% |
| 2020 – 2025 | 100% |



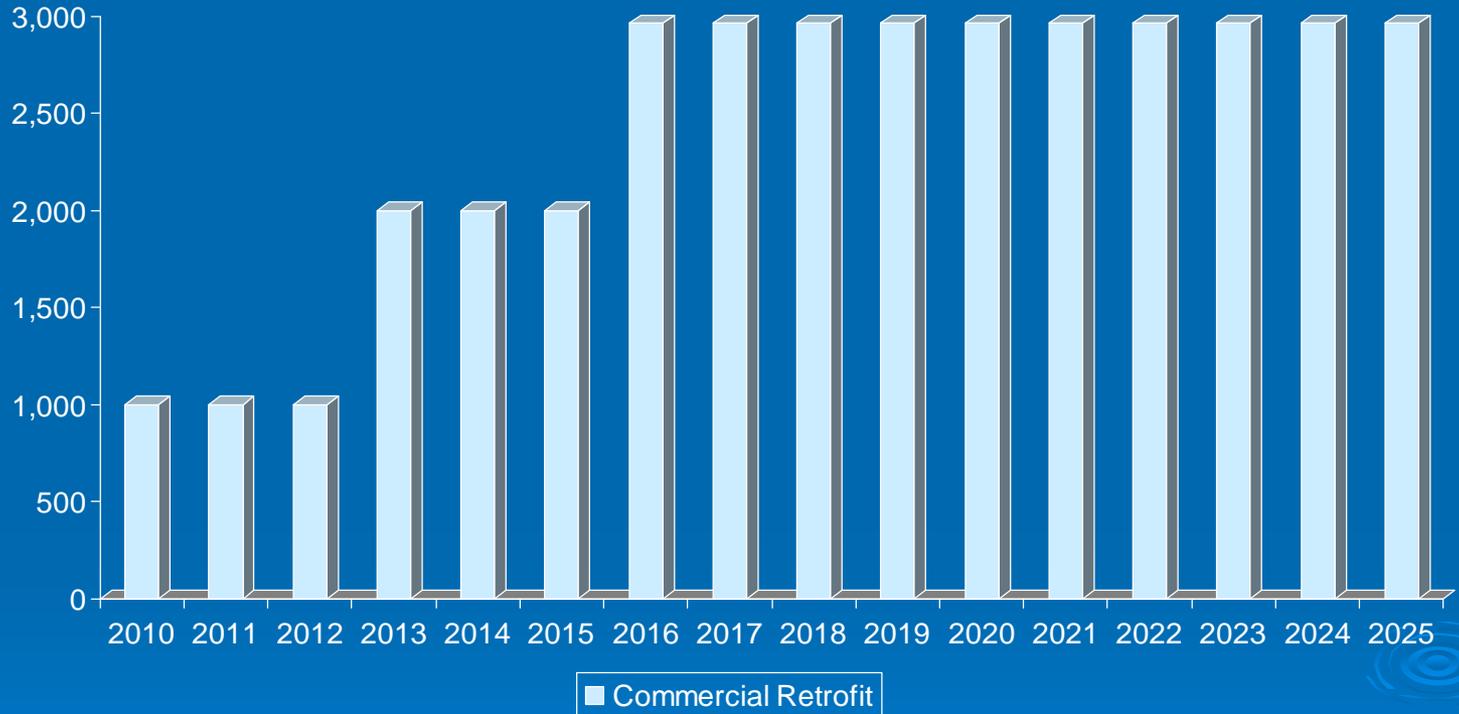
What We Need To Do – Retrofit Residential Buildings at 60% Efficiency Level (RCI 1.2)

| Year | Units |
|---------|--------|
| 1 | 5,000 |
| 2 | 7,500 |
| 3 | 10,000 |
| 4 | 15,000 |
| 5 | 20,000 |
| 6 | 25,000 |
| 7 – 9 | 35,000 |
| 10 – 16 | 40,500 |



What We Need To Do – Retrofit Commercial Buildings at 50% Efficiency Level (RCI 1.3)

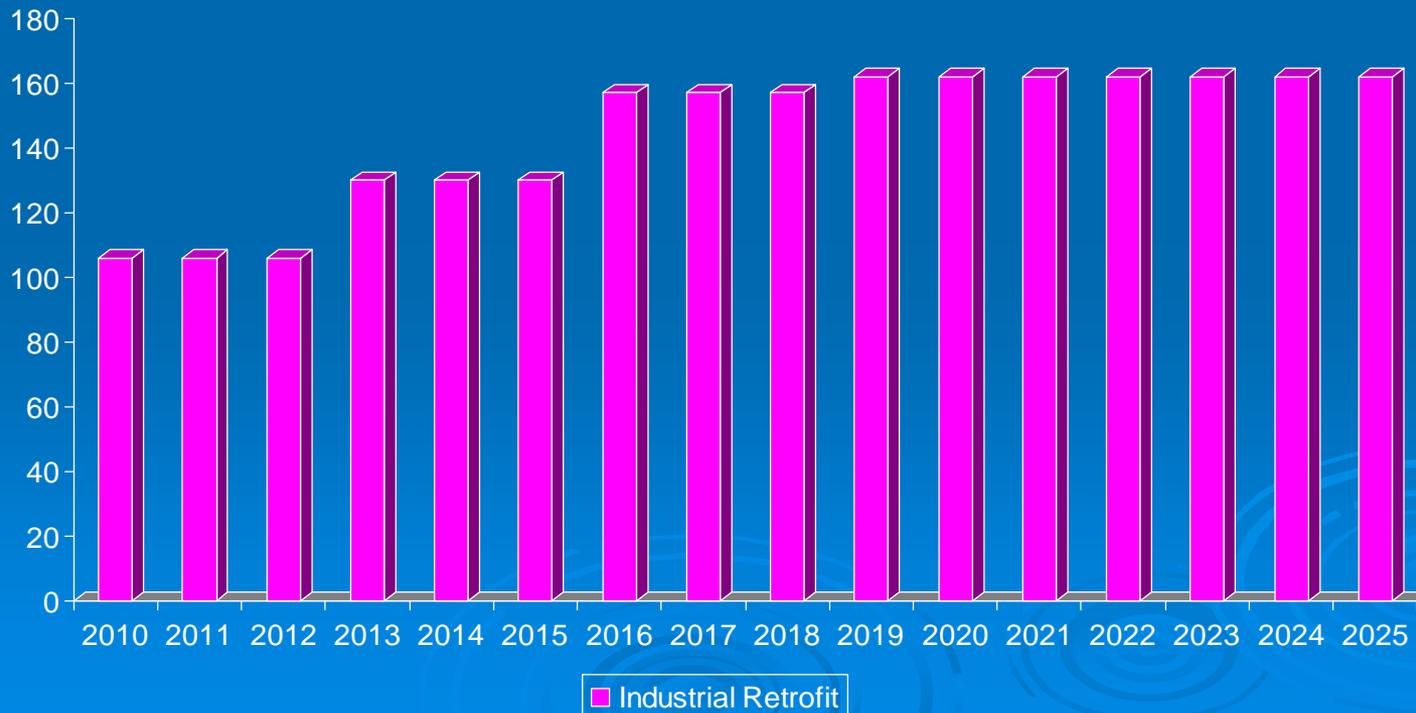
| Year | Units |
|--------|-------|
| 1 – 3 | 1,000 |
| 4 – 6 | 2,000 |
| 7 – 16 | 2964 |



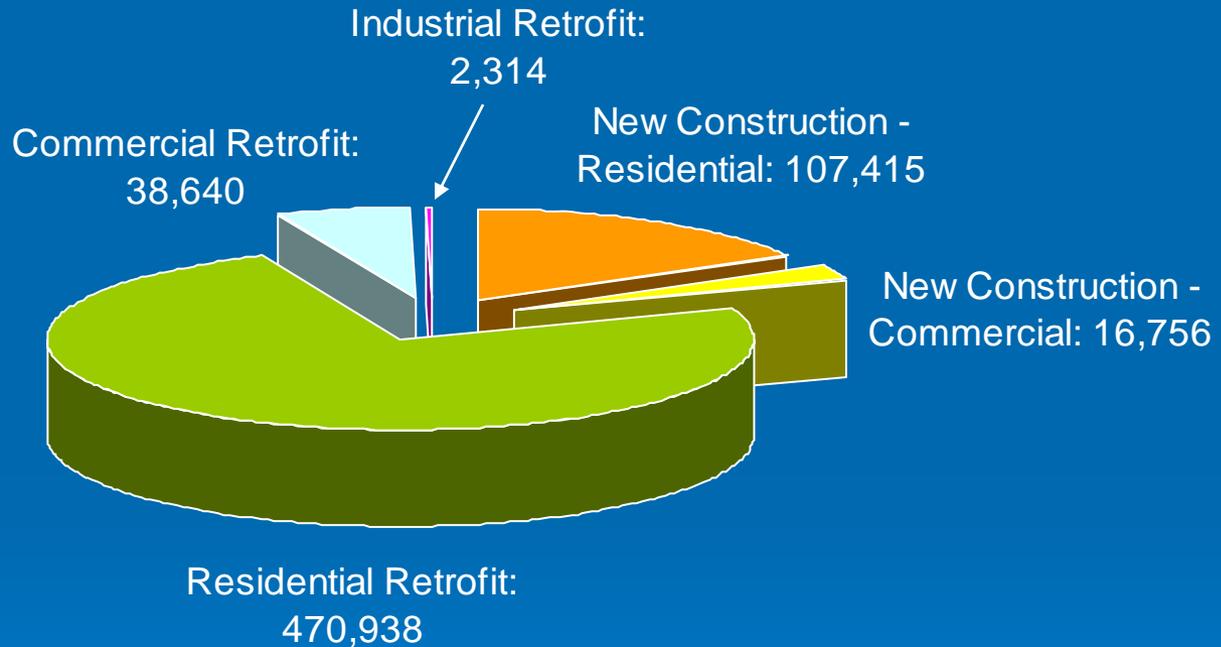
What We Need To Do – Retrofit Industrial Buildings (RCI 1.3)

| Year | Units |
|---------|-------|
| 1 – 3 | 106 |
| 4 – 6 | 130 |
| 7 – 9 | 157 |
| 10 – 16 | 162 |

| Years | Efficiency Levels |
|-------------|-------------------|
| 2010 - 2014 | 15% |
| 2015 - 2019 | 30% |
| 2020 – 2025 | 50% |

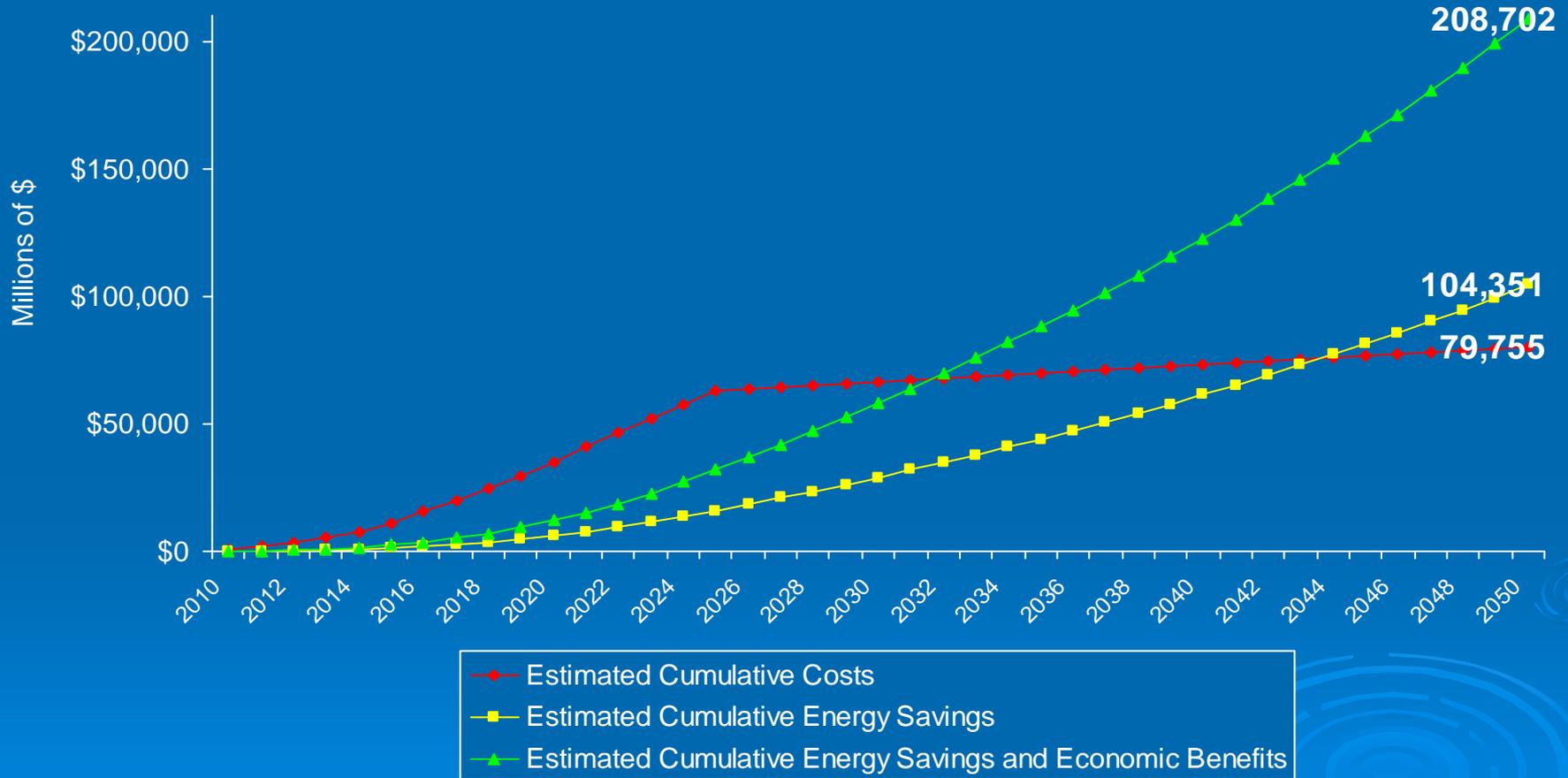


Buildings – Ramp Up Scenario Total Units Completed by 2025



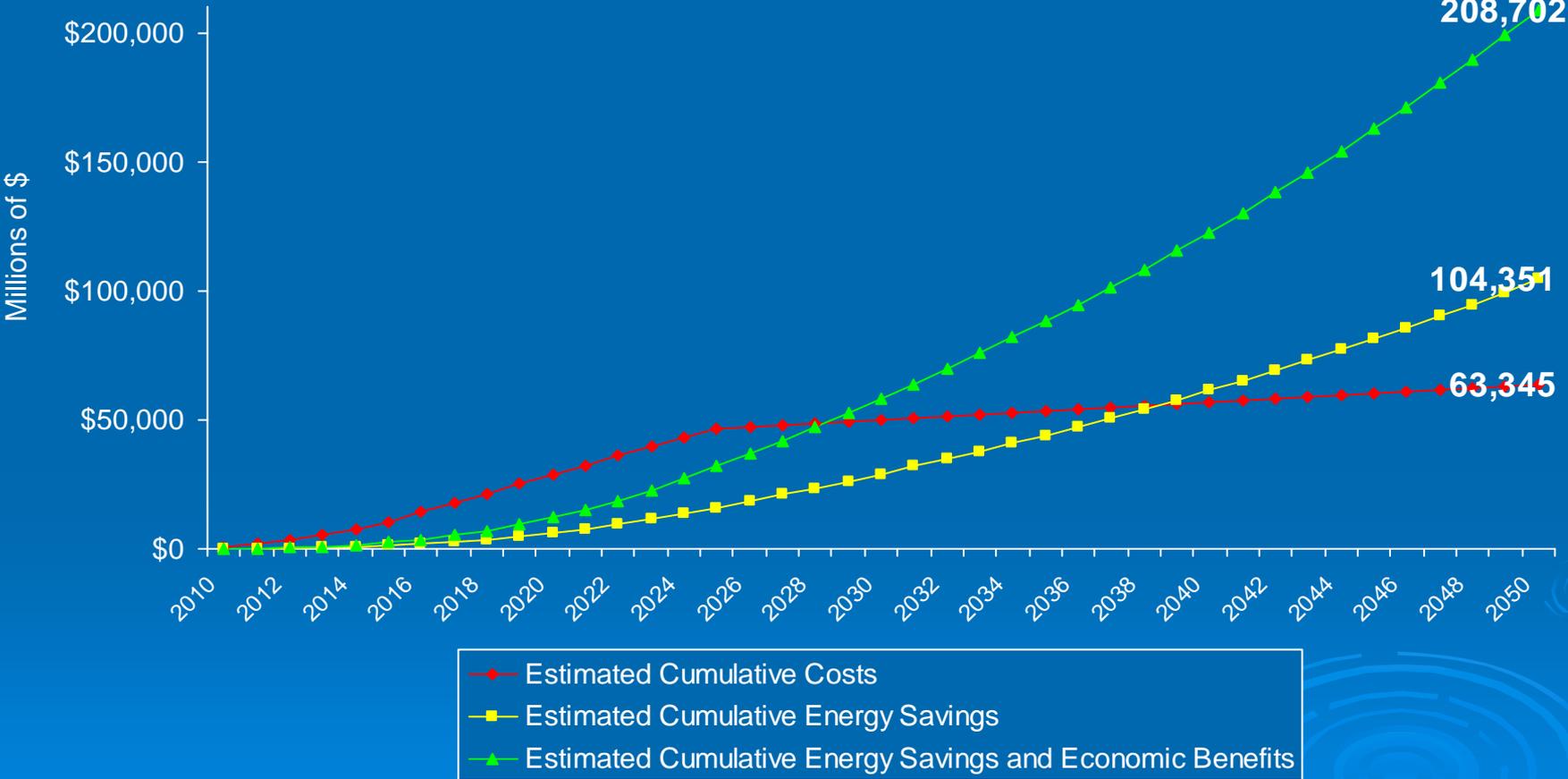
Cumulative Costs and Savings - Buildings Sector

(Assumes Residential Retrofit at \$100k per Unit, no escalation)



Cumulative Costs and Savings - Buildings Sector

(Assumes Residential Retrofit at \$100k per Unit from Years 1 - 5, \$75k per Unit from Years 6 - 10 & \$50k from Years 11 - 16, no escalation)



Issues/Next Steps

- Additional actions will be needed to reach 50% reductions in the Buildings and Electric Sectors.
- Identify actionable items to support Electric Sector reductions.
- “Drill down” all actions to include milestones, resource requirements, and supporting actions.