

Sustainable Building Policy Update Recommendations

Northfield – EQC Meeting

Katie Jones, Community Program and Policy Manager



Agenda

- Current policy
- Policy change recommendations

Which properties are impacted by the policy?

- New construction and renovations/additions of:
 - City of Northfield or HRA properties
 - Properties that the City or HRA are/will be sole tenant
 - Properties that receive financial assistance



Policy Trigger – Financial Incentive

- Amount
 - Tier 1: \$150,000-\$300,000 – prove unfeasibility
 - Tier 2: >\$300,000 – required
- Type
 - Housing & Redevelopment Funds
 - Tax Increment Financing (TIF)
 - EDA – only grants and forgivable loans
 - Land write downs
 - Bonds
 - Tax abatement
 - Low-income housing tax credit
 - MIF
 - Conduit financing
 - All projects with state and federal funding requiring approvals by the City, Northfield EDA or HRA (i.e. ARP)



Sustainable Building Policy Components





Rating System Options (Holistic Sustainability Criteria)



- B3
- LEED – minimum Silver
- Green Communities
- ParkSmart - minimum Silver
- Other rating systems as approved



Northfield Green Requirements (NGR)



Required regardless of rating system selected

- Predicted Greenhouse Gas Emissions
- Energy Efficiency
- Renewable Energy



Predicted Greenhouse Gas

- Calculated based on predicted energy use, as ascertained through the sustainability rating system modeling, using utility emissions factors and reported to the City in metric tons of CO₂e



image: Freepik.com



Energy Efficiency

- Meet SB 2030 Energy Standard through design and operation
- For 1-3-unit buildings, meet DOE's Zero Energy Ready Homes standard.





Renewable Energy

- Evaluate 2% of on-site renewables
- Install if cost-effective within 15-year payback using SB 2030 methodology.





Opportunities for Better Implementation



SBP Conflicts

Component	Requirement	Compliance Pathway
Third Party Green Rating System	Rating System	Green Communities or LEED
Northfield Green Requirements	Greenhouse Gas Emissions	Calculated from energy model
	Energy Efficiency	Both SB 2030 and ENERGY STAR/LEED points needed
	Renewable Energy	Credits can be earned for renewables

This conflict does not bring about significant valuable energy savings but does add significant complexity and cost.

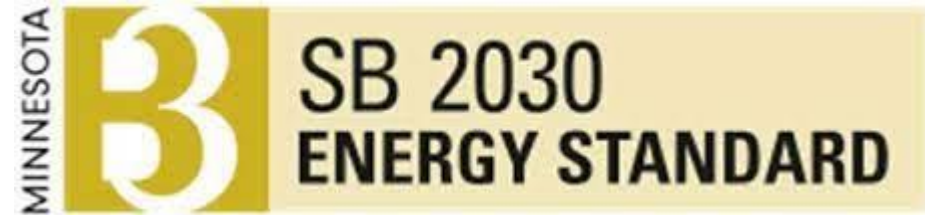


Policy Conflict Example



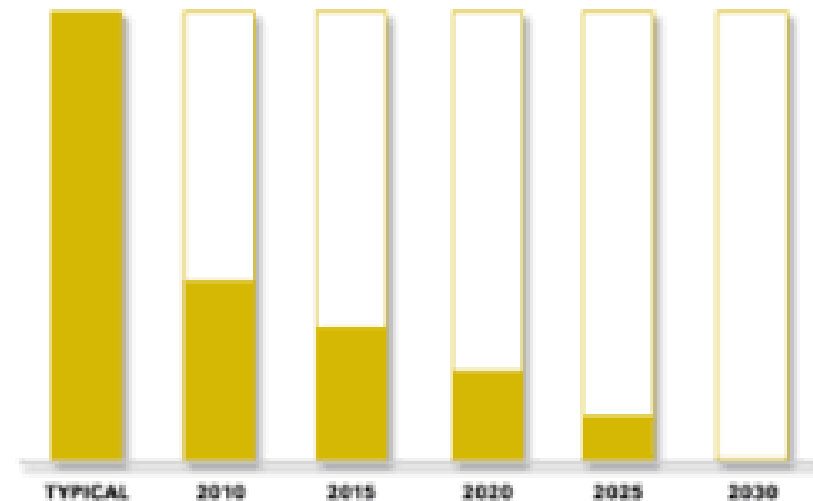
Green Communities components

- Integrative design
- Location + neighborhood fabric
- Site improvements
- Water conservation
- **Energy Efficiency → via ENERGY STAR**
- Materials
- Healthy Living Environment
- Operations, Maintenance, and Resident Engagement



SB 2030 components

- **Energy Efficiency**
- Renewable Energy



SB 2030 Energy Standard

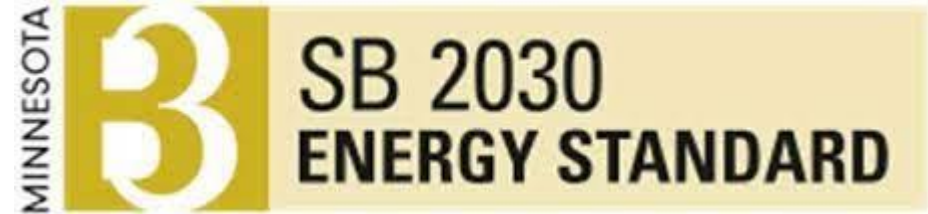
Building Energy Consumption from Carbon Producing Fuel

Environment

Differences



- Model compares to code
- Typically results in buildings ~15% better than code



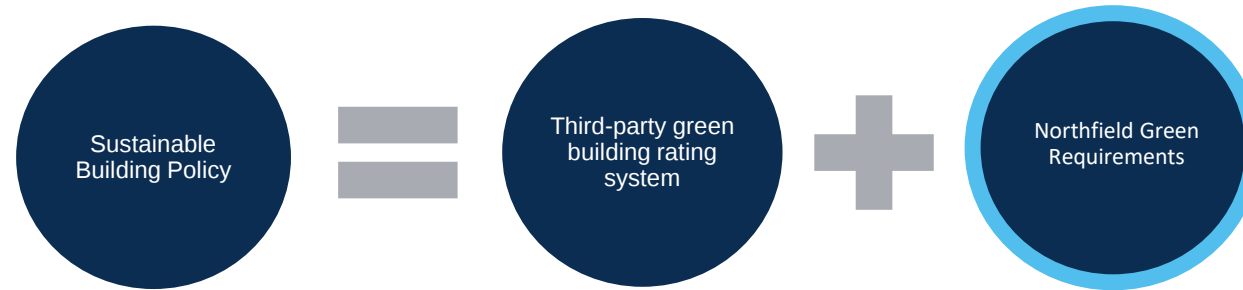
- Model compares to 2006 building
- 80% reduction in CO2e via prioritization of:
 1. Efficiency
 2. Onsite renewables
 3. Renewable energy credits

Issue: redundant modeling that brings no value to the project and adds costs, which is particularly an issue for an affordable housing development



Policy Change Considerations

Update the Northfield Green Requirements



EXAMPLE: Required regardless of rating system selected

- Predicted Greenhouse Gas Emissions
- Renewable Energy
- Energy Efficiency
- Commercial: Meet SB 2030 Energy Standard through design and operation with a payback period of 15 years*
- Residential: ~~For 1-3-unit buildings,~~ For single and multifamily buildings meet DOE's Zero Energy Ready Homes standard or higher within the DOE's family of standards, PHIUS, or Passive House standard.

Why these efficiency certifications?

- Better alignment with rating systems
- Ensures strong efficiency
- Local examples exist

						Source Zero Renewable Energy System
						Balanced Ventilation HRV/ERV
				SOLAR READY Depends on climate	SOLAR READY ALWAYS	SOLAR READY ALWAYS
				Eff. Comps. & H ₂ O Distrib	Eff. Comps. & H ₂ O Distrib	Eff. Comps. & H ₂ O Distrib
				 EPA Indoor Air Package	 EPA Indoor Air Package	 EPA Indoor Air Package
				Ducts in Condit. Space	Ducts in Condit. Space	Ducts in Condit. Space
		HVAC QI w/WHV	HVAC QI w/WHV	HVAC QI w/WHV	Micro-load HVAC QI	Micro-load HVAC QI
		Water Management	Water Management	Water Management	Water Management	Water Management
		Independent Verification	Independent Verification	Independent Verification	Independent Verification	Independent Verification
IECC 2009 Enclosure	IECC 2012 Enclosure	IECC 2009 Enclosure	IECC 2012 Enclosure	IECC 2012/15 Encl./ES Win.	Ultra-Efficient Enclosure	Ultra-Efficient Enclosure
HERS 85-90	HERS 70-80	HERS 65-75	HERS 55-65	HERS 48-55	HERS 35-45	HERS < 0
 IECC 2009	 IECC 2012	 ENERGY STAR v3	ENERGY STAR v3.1	 ZERH	 PHIUS+ PHIUS+	 PHIUS+ SourceZero



Northfield Passive Example – HillCrest Village



What about mixed use?



> 50% of sqft is multifamily, the project should follow the **residential** path

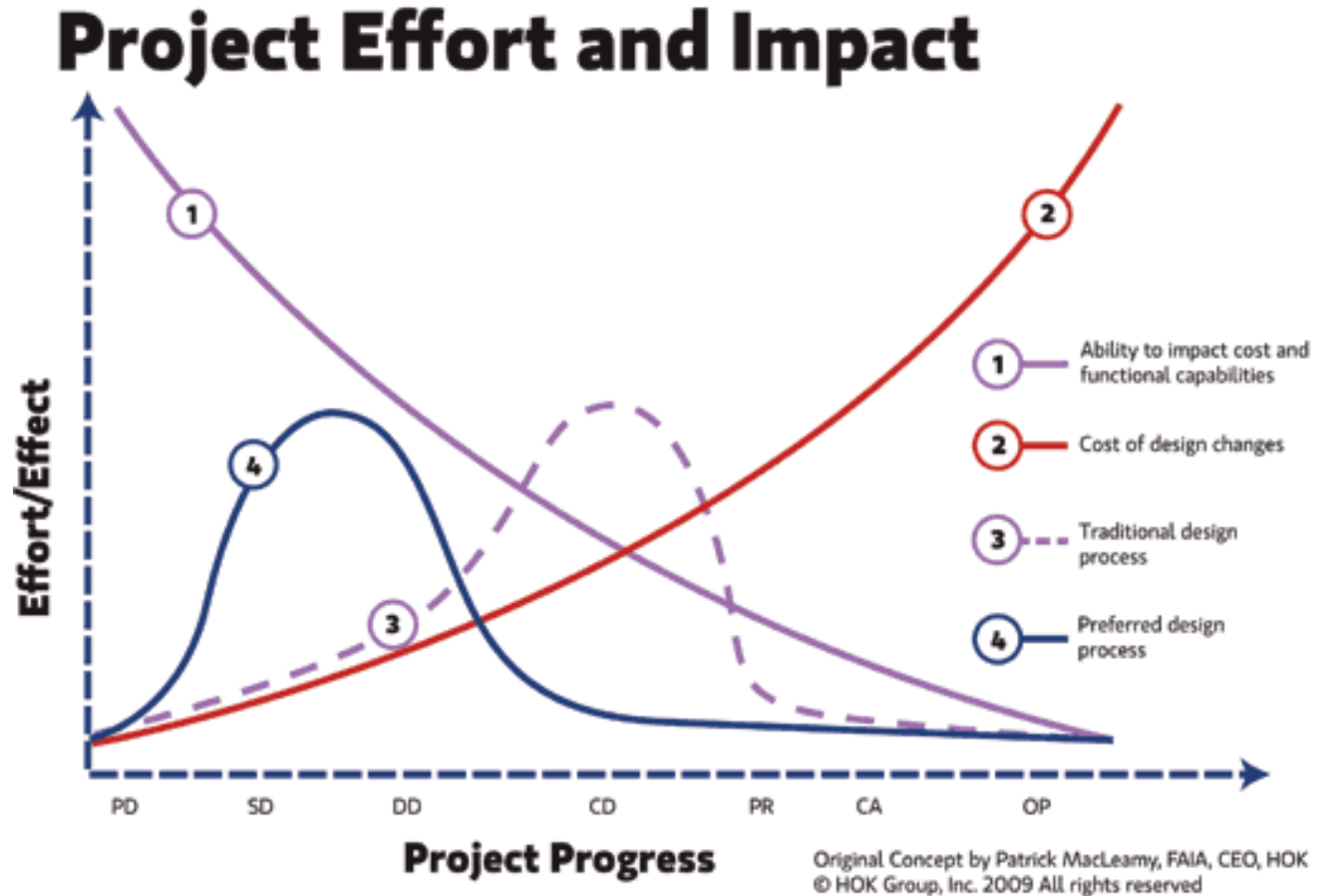


< 50% of sqft is multifamily, the project should follow the **commercial** path



Keys to the Policy's Success

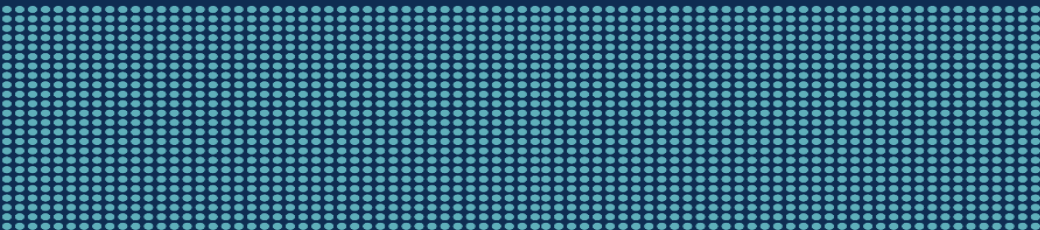
- Incorporate sustainability **EARLY**
- Hear of a new development? Tell them about SBP!
- Is a project scoping out uses? Talk SBP now!





QUESTIONS





THANK YOU!

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GreenStar Attributes

- Hybrid LEED/B3 approach
 - Certain measures are required
 - Certain number of points must be reached through tallying optional measures
- Developed in northern climates
- Designed for residential
- Onsite and virtual verification options
- Accessible administration





Category comparisons

GreenStar	B3	LEED	Green Communities
Energy	Energy and Atmosphere	Energy	Operating Energy
Water	Site and Water	Water efficiency	Water
Health / IAQ	Indoor Environmental Quality	Healthy Living Environment	Healthy Living Environment
Operations (Points)	Performance Management	Operations & Maintenance	Operations, Maintenance, and Resident Engagement
Site (Points)	Site and Water	Sustainable Sites	Location and Neighborhood
Materials (Points)	Materials and Waste	Materials and Resource Use	Materials
			Integrative design



Thresholds

- Certified
- Silver – requires 20 pts
- Gold – requires 50 pts
- Platinum – requires 80 pts

Optional Badges

- Zero energy capable
- Zero energy ready
- Zero water capable
- Electrified living
- Healthier Home
- Accessibility
- Reduced Electromagnetic Frequency (EMF)
- Resilience
- Foam Free



GreenStar Use

- City Sustainable Building Policies with GreenStar
 - St. Paul
 - Silver or higher certification
 - Rochester
 - Silver or higher certification
 - St. Louis Park
 - for Housing Improvement Fund \$ only; for other funds LEED and B3 are the two options