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 MINNESOTA BUILDING CODE	 MINNESOTA ACCESSIBILITY CODE	 MINNESOTA RESIDENTIAL CODE • Administration • Construction • Radon	 MINNESOTA ENERGY CODE with ANSI/ASHRAE/IES STANDARD 90.1	 MINNESOTA MECHANICAL and FUEL GAS CODE WITH ANSI/ASHRAE STANDARD 62.2-2010 ANSI/ASHRAE STANDARD 154-2016	 MINNESOTA CONSERVATION CODE for EXISTING BUILDINGS
 	 	 	  	 	 
   DEPART LABOR	   DEPART LABOR	   DEPART LABOR	    DEPART LABOR	    DEPART LABOR	   DEPART LABOR

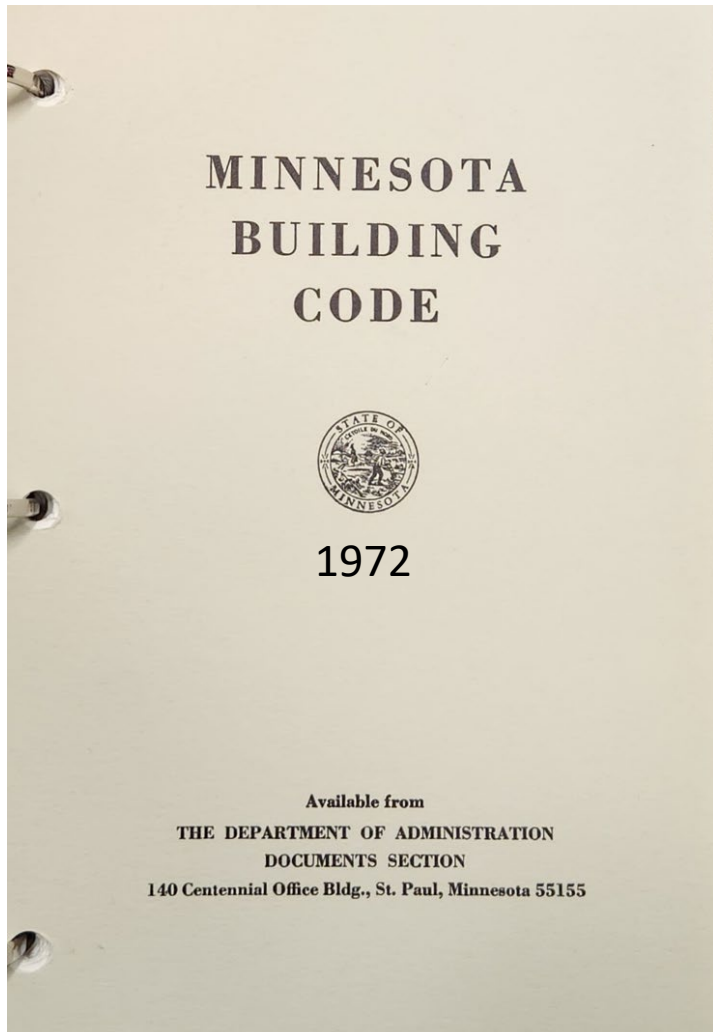




Deputy Commissioner Kate Perushek
Department Update

Scott McLellan Division Update

50-years of the State Building Code



The State Building Code is 50!

July 1, 2022, marked the 50-year anniversary of the first State Building Code.

50-years of the State Building Code

Highlights from 50 years ago in 1972

- Median new home cost was ***\$29,000*** versus \$471,200 today
- ***35,500*** new single-family homes built versus 63,000 in 2022
- Gas was ***39 cents*** per gallon versus \$3.27 today
- Median income was ***\$12,000*** versus \$71,000 in 2022

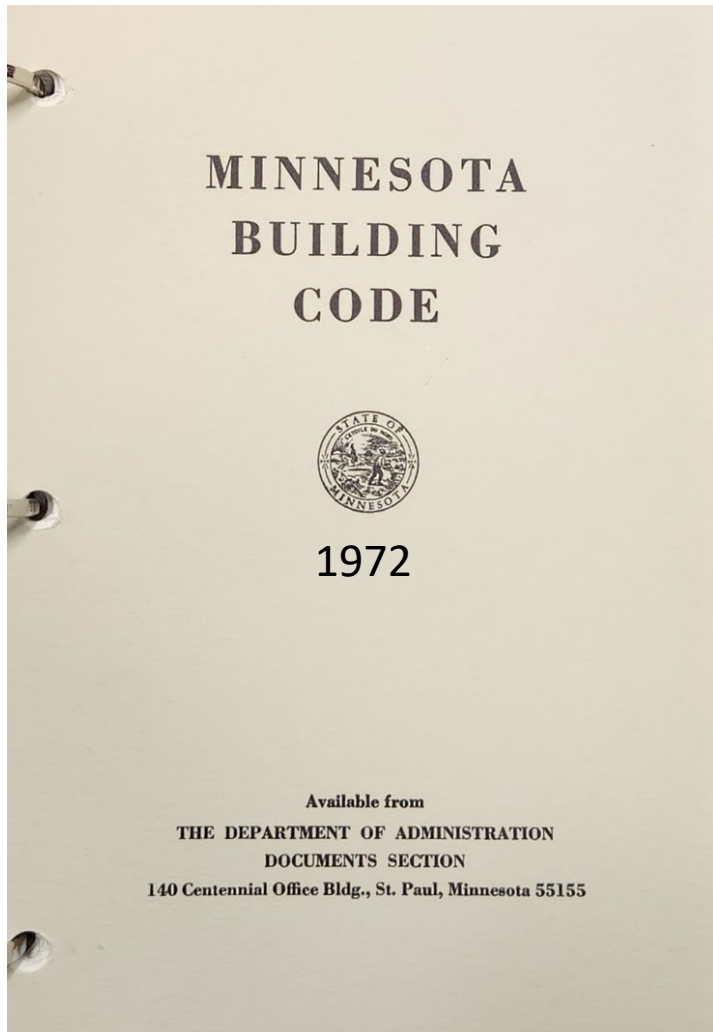


50-years of the State Building Code – Past, Present, & Future Continuing the Vision!



THE STATE BUILDING CODE, 1972–2022
Celebrating 50 years of building safety in Minnesota

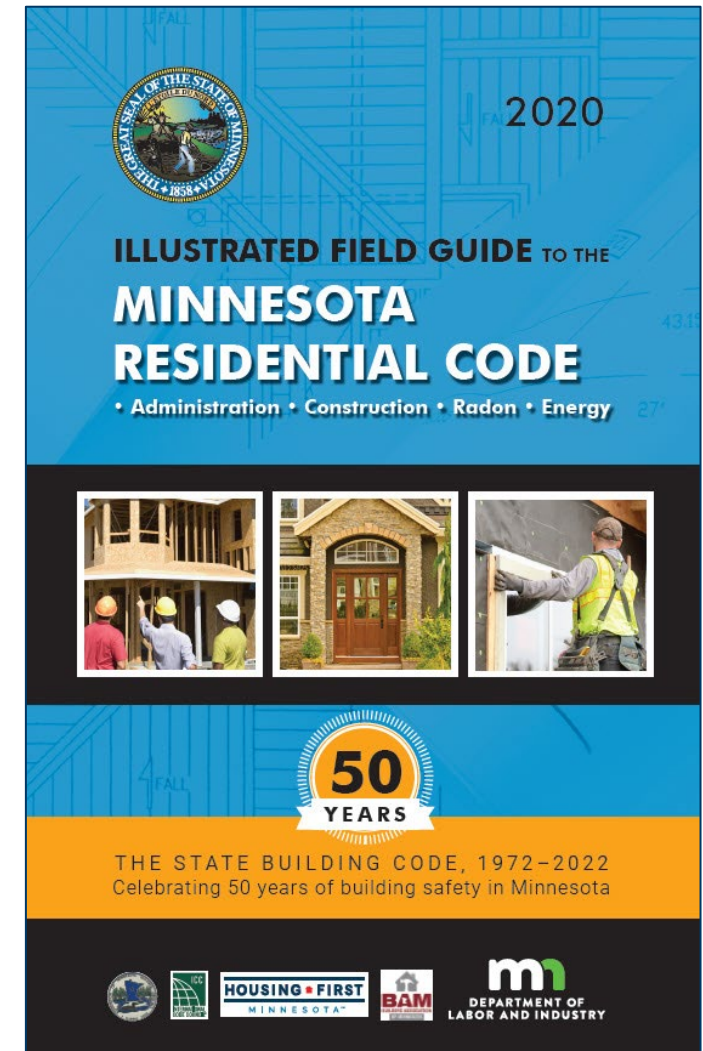
50-years of the State Building Code



- 50-year-old technology
- Could we do better?
- Something more than words on paper

Illustrated Field Guide to the MN Residential Code

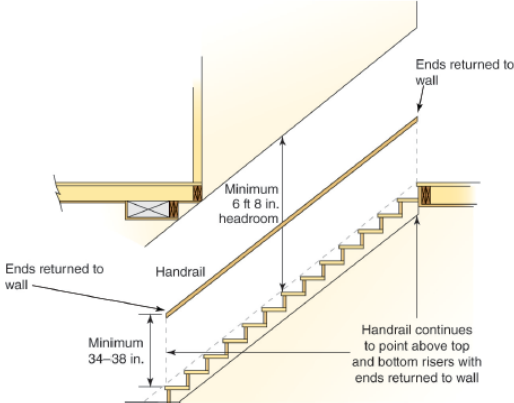
- Useful – Minnesota specific amendments
- Communicate clearly
- Practical – compact and durable
- Accurate
- Benefit inspectors, homebuilders, remodelers, deck-builders, siders, roofers



Illustrated Field Guide to the MN Residential Code

- Simplify code compliance
- Minimize misunderstandings
- Eliminate common code controversies
- Level playing field for contractors

178 CHAPTER 8 Home Safety



CHAPTER 8

FIGURE 8-6 Stairway headroom and handrail height

Code Essentials

Prescriptive vs. performance

Prescriptive code provisions

- Handrail height is 34–38 inches
- Min. guard height is 36 inches

Performance code provisions

- Handrails shall provide equivalent graspability
- Handrails and guard top rails shall resist a single concentrated load of 200 pounds

line”), and this configuration allows a turn in the stairway without a landing and without creating an undue hazard. [Ref. R311.7.5.2.1]

Spiral Stairways

The code permits spiral stairways at any location in a dwelling (Figure 8-10). They have lesser dimensions for width, treads and headroom and greater

Scott McLellan

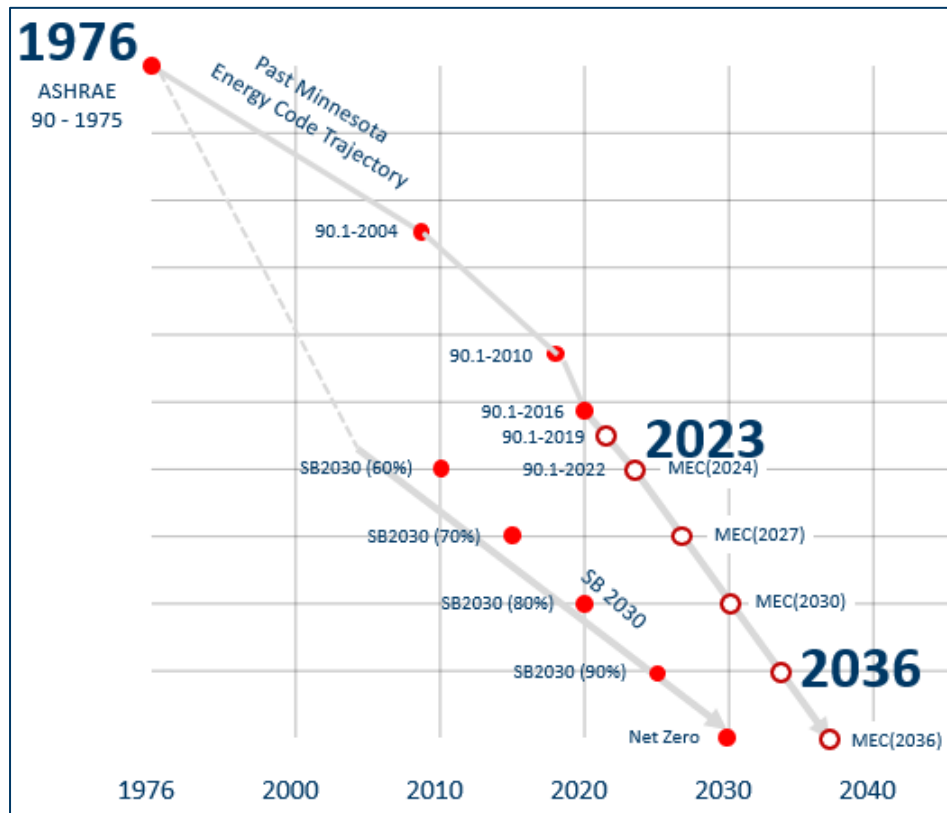
Old Business – Proposed DLI Legislation

Proposed DLI Legislation

Commercial Energy Code

Issue: At the current rate, Minnesota will not achieve its goal for new construction to be net-zero by 2036.

Proposed resolution: Maximize energy efficiency in new and remodeled buildings by accelerating and enhancing adoption of new commercial energy codes by 2036.



EV Charging Stations



Issue: One of the largest barriers to electric vehicle purchases to assist in reducing greenhouse gas emissions is the lack of available charging stations.

Proposed resolution: Add scoping requirements in law to be able to include charging stations in code.

Window Cleaning Safety

Issue: Current statute requires window cleaning anchors on all buildings, four or more stories in height, regardless if they can be accessed for use by suspended window washers.

Proposed resolution: Permit all nationally recognized safe window cleaning methods through the building code.



Assisted Living

Issue: Current statute does not allow code enforcement of assisted living facilities in non-codes areas.

Proposed resolution: Amend definition of state licensed facilities to include *assisted living facility* and *assisted living facility with dementia care*.



Boiler Inspections

Issue: Current exceptions are identical for both hot water supply boilers and industrial water-heaters. These are two distinctly different devices that operate at much different temperatures.



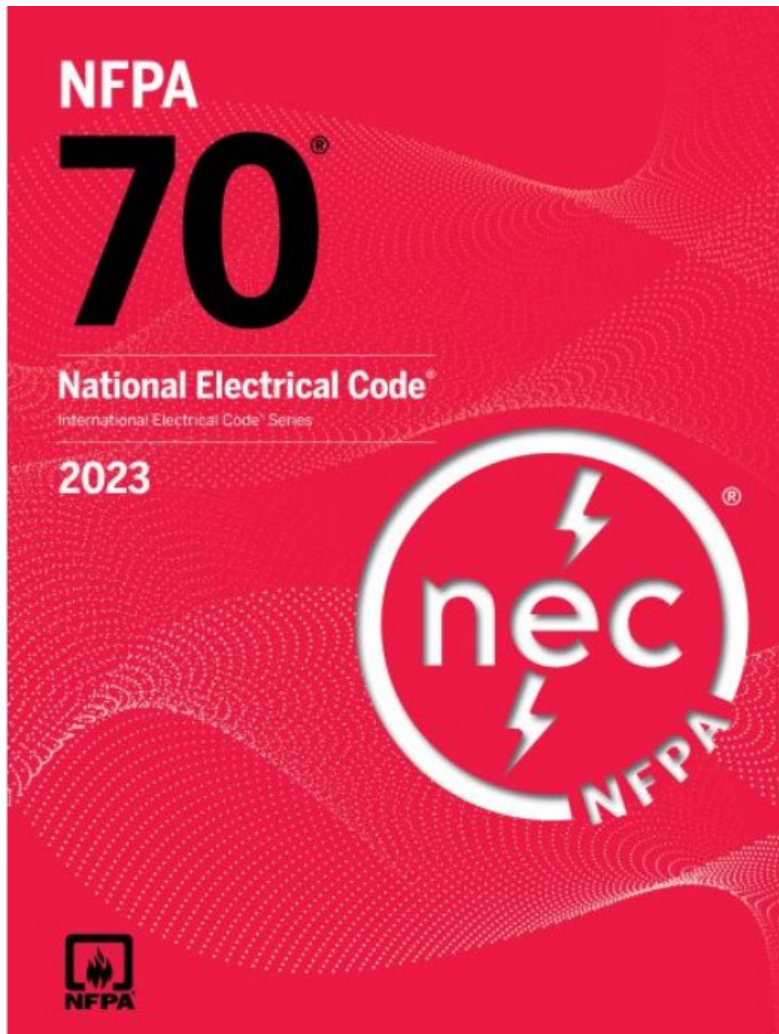
Proposed resolution: Define hot water supply boilers and potable water heaters by their respective temperature limits and the lower input of 200,000 BTU/HR. This would match current requirements of the National Boiler Inspection Code.

Licensing

- Allow for the refund of Contractor Recovery Fund fee if a residential building contractor license is not *renewed* or issued.
- Change wait time for individuals who fail a license exam to 30 days from date of failed exam instead of from date mailed.
- Reduce the reinstatement fee from \$100 to \$50 after license suspension or revocation to \$25 if voluntarily terminated.
- Clarify when a license is required for building or improving homes for resale or speculation.

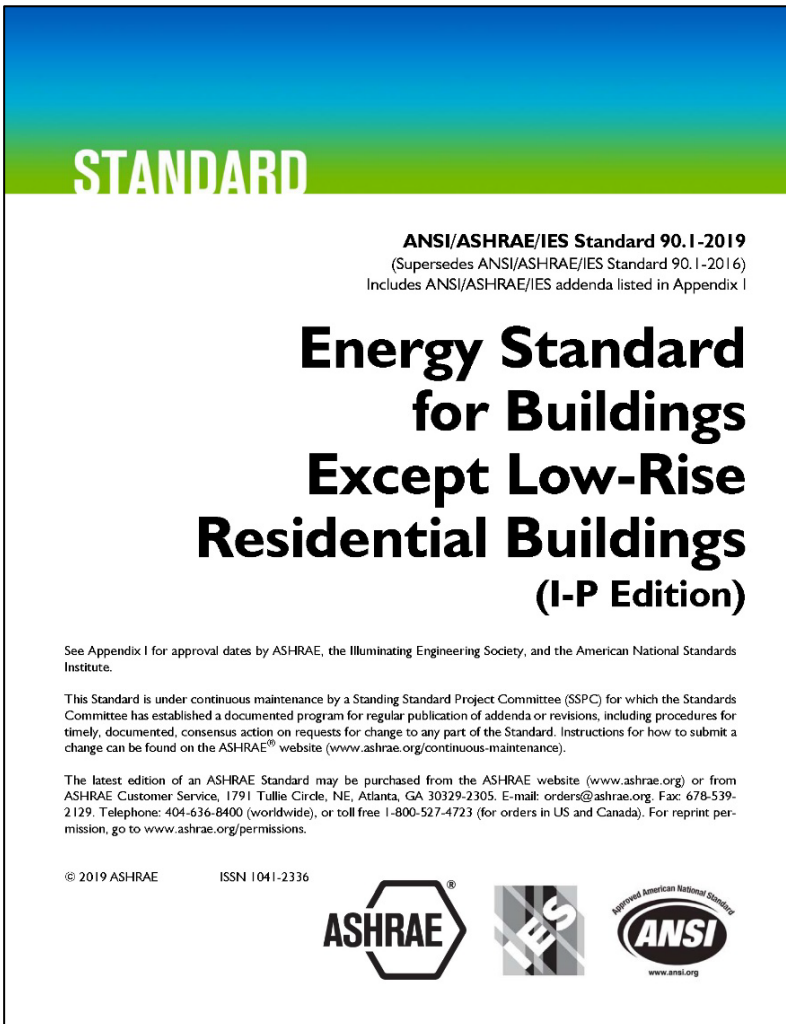
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New Business – Code Updates



NEC 2023

- On Jan. 31, the Board of Electricity accepted their sub-committee's recommendation to adopt the 2023 NEC without amendments.
- The NEC 2023 will become effective July 1, 2023.



New Commercial Energy Code

- The proposed rule will be adopted in March 2023 and become effective in November 2023.
- This will adopt ASHRAE 90.1-2019 with amendments and replace the commercial portion of the IECC.
- The department is working with NW Pacific Labs to create a custom Comcheck for Minnesota to simplify compliance.



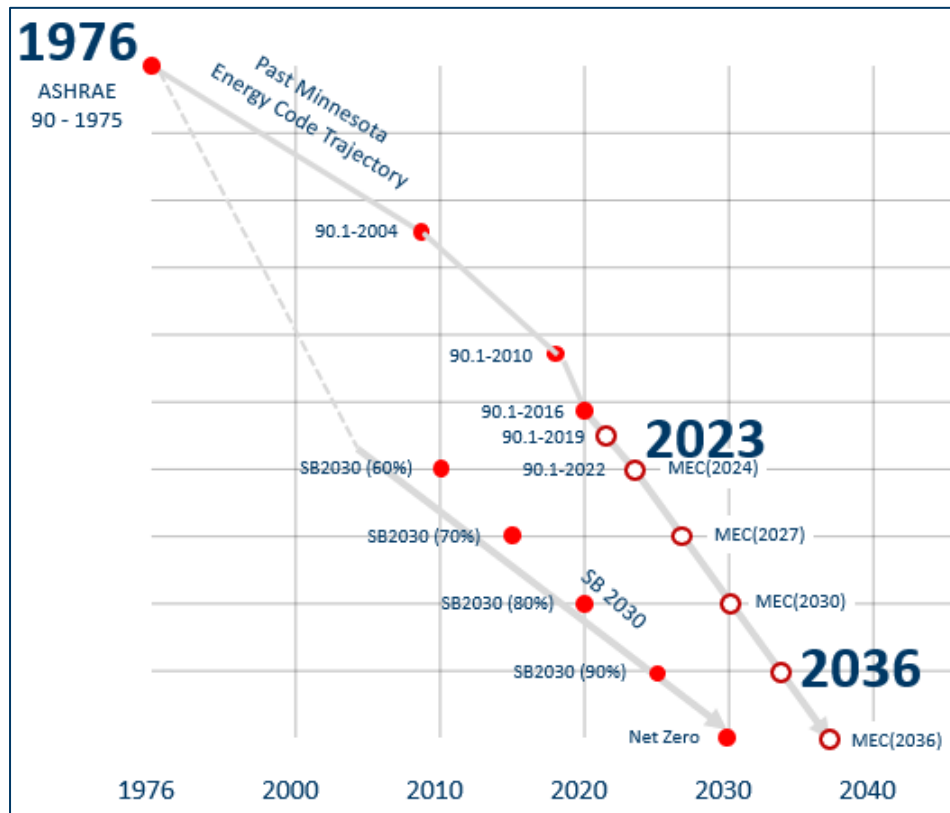
New Residential Energy Code

- A public hearing was held on Aug. 23 re adopting the 2021 IECC (Residential Code)
- The administrative law judge issued a report stating that the record could support adopting the 2021 IECC or waiting for the 2024 edition.
- The commissioner has made the decision to explore and review the appropriateness of adopting the 2021 IECC in consultation with the Construction Codes Advisory Council.

New Business – Proposed Legislation

Proposed Legislation – Commercial Energy Code – HF772 Chair McLellan

Commercial Energy Code – Joint proposal with DLI



Issue: At the current rate, Minnesota will not achieve its goal for new construction to be net-zero by 2036.

Proposed resolution: Maximize energy efficiency in new and remodeled buildings by accelerating and enhancing adoption of new commercial energy codes by 2036.

Commercial Energy Code – Joint proposal with DLI

(d) ...The commissioner may adopt amendments prior to adoption of the new energy codes, as amended for use in Minnesota, to advance construction methods, technology, or materials, or, where necessary to protect the health, safety, and welfare of the public, or to improve the efficiency or use of a building or to mitigate the impact of climate change by increasing energy efficiency, improving resiliency, and reducing greenhouse gas emissions of new buildings and of existing buildings undergoing additions, alternations, and changes of use.

(e) Beginning in 2024, the commissioner shall act on the new model commercial energy code by adopting each new published edition of ASHRAE 90.1 or a more efficient standard. The state energy code for commercial construction in effect in 2036 and thereafter must achieve an eighty percent reduction in annual net energy consumption or greater, using the ASHRAE 90.1-2004 as a baseline. The Commissioner shall adopt state energy codes for commercial construction from 2024 through 2036 that incrementally move towards achieving the eighty percent reduction in annual net energy consumption. The Commissioner shall report to the appropriate committee within the legislature its progress in January following each new code adoption.

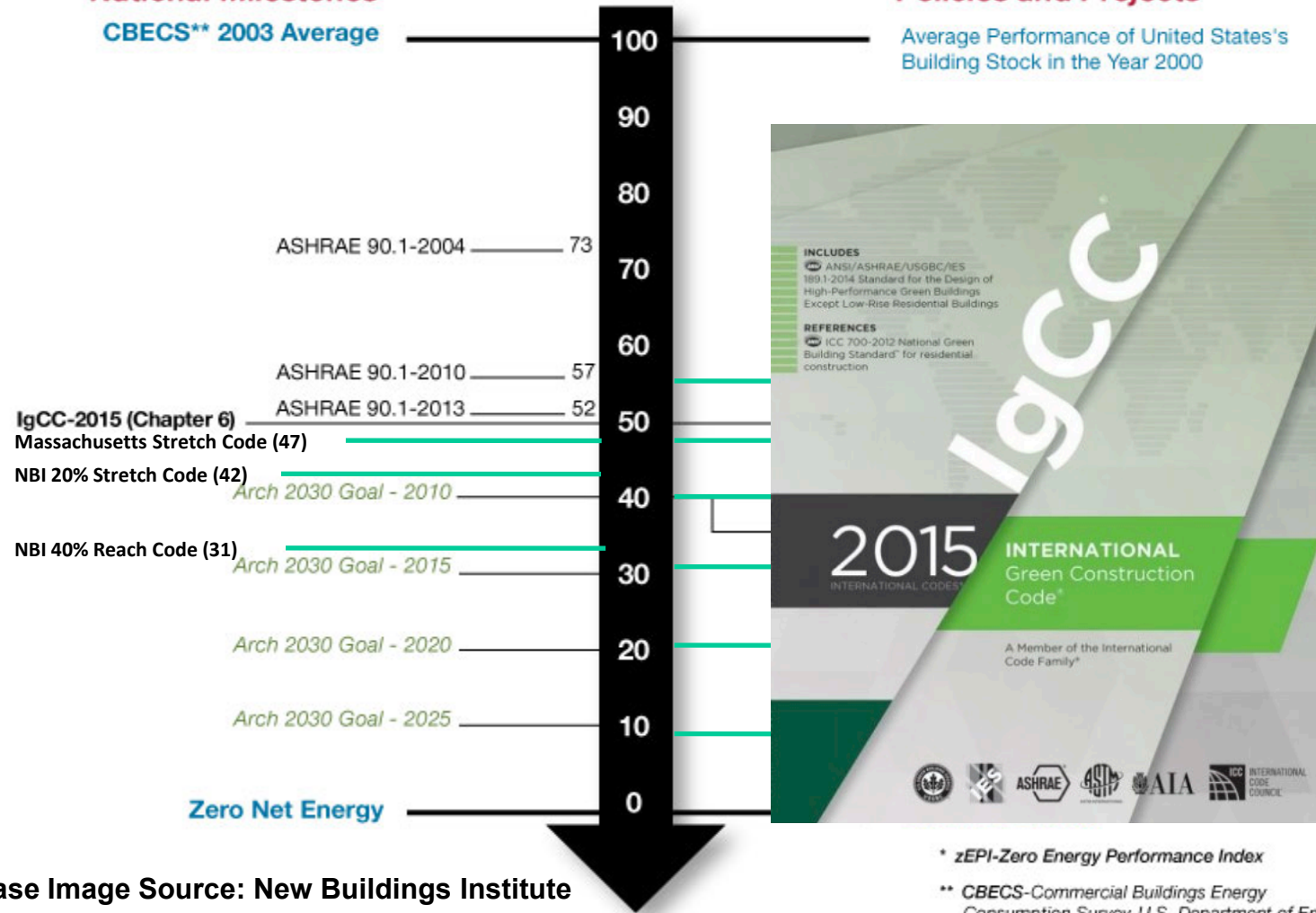
zEPI* Scale to ZNE

National Milestones

CBECS** 2003 Average

Policies and Projects

Average Performance of United States's Building Stock in the Year 2000



Base Image Source: New Buildings Institute

* zEPI-Zero Energy Performance Index

** CBECS-Commercial Buildings Energy Consumption Survey-U.S. Department of Energy

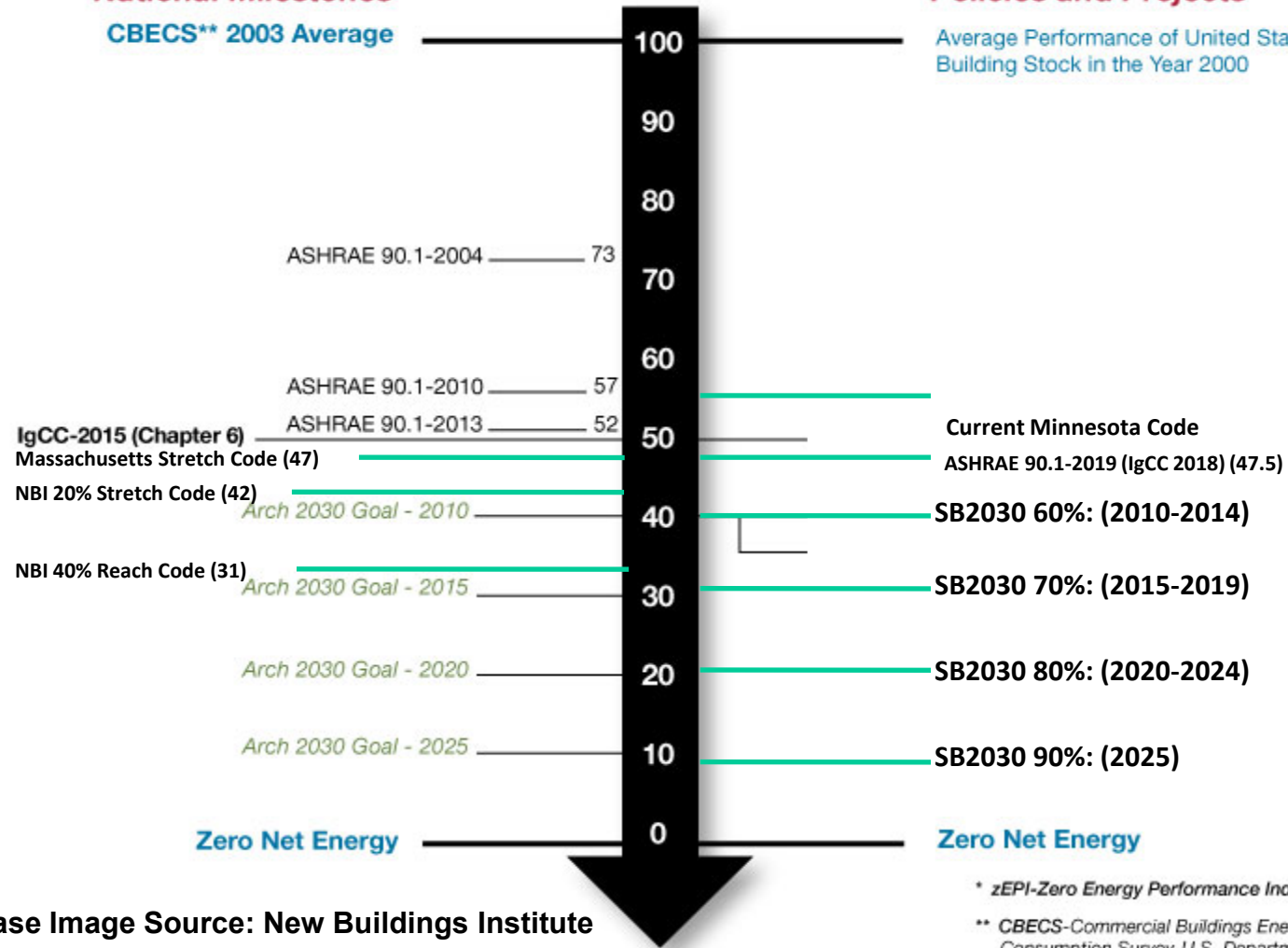
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National Milestones

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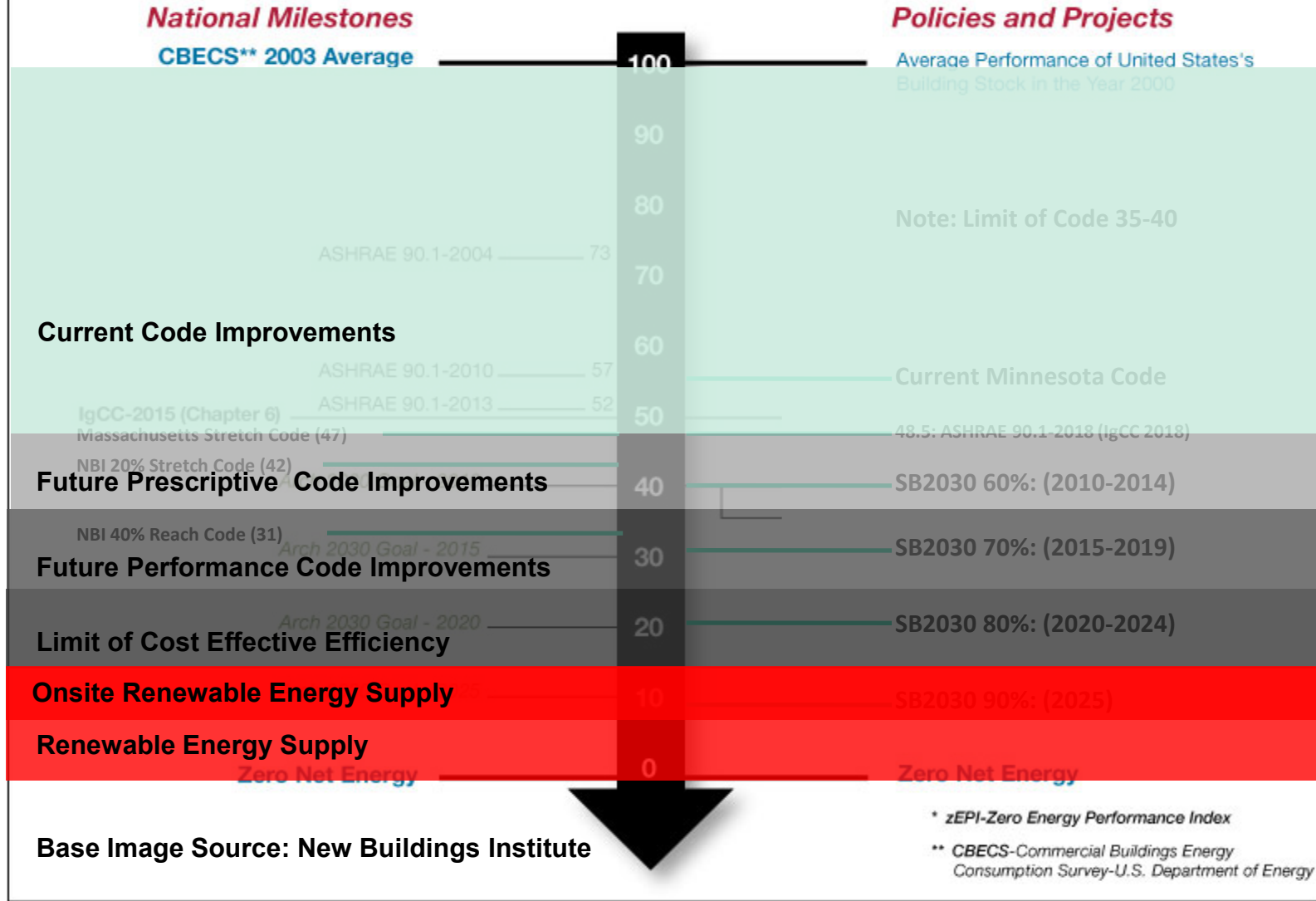


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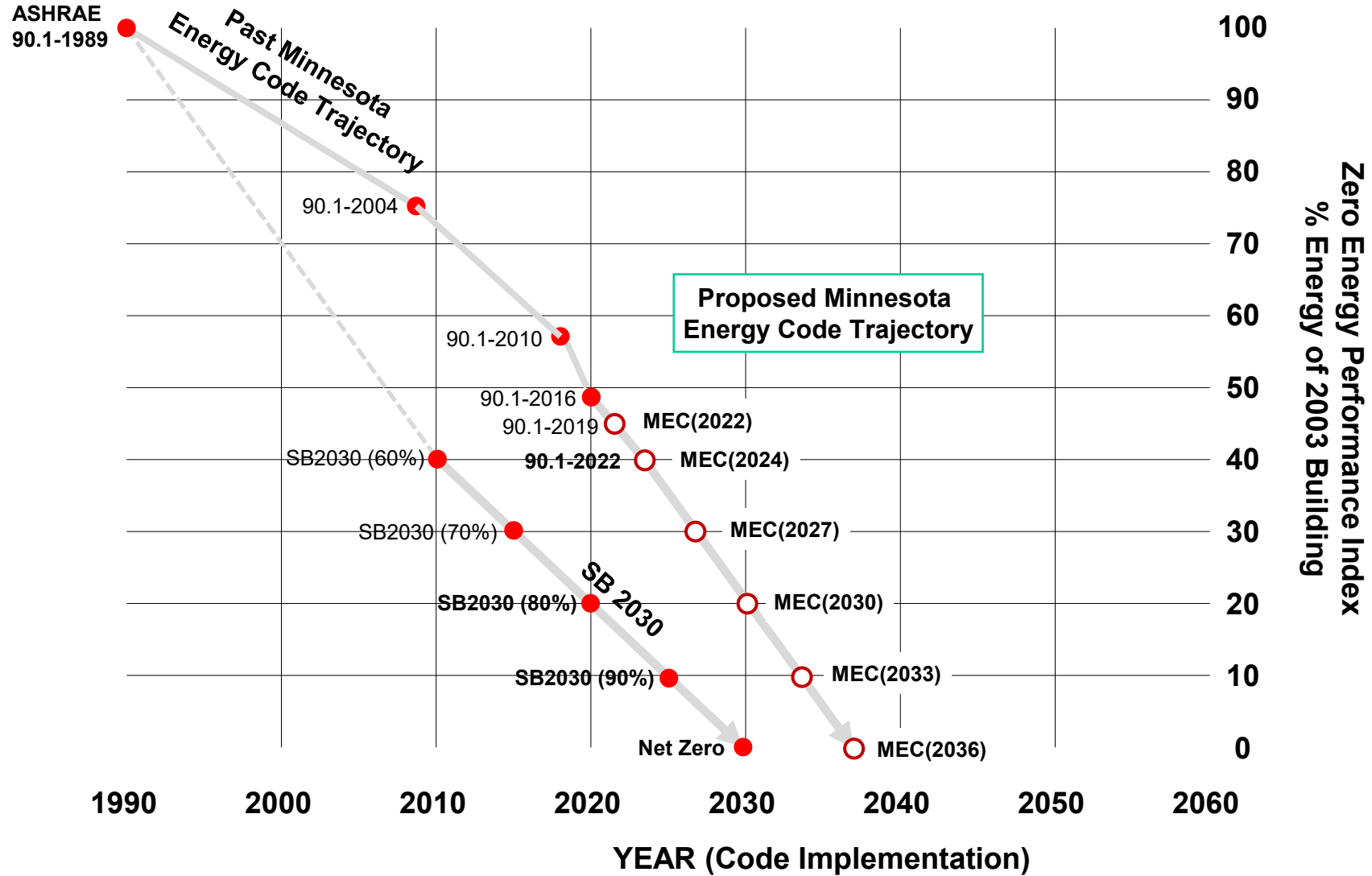
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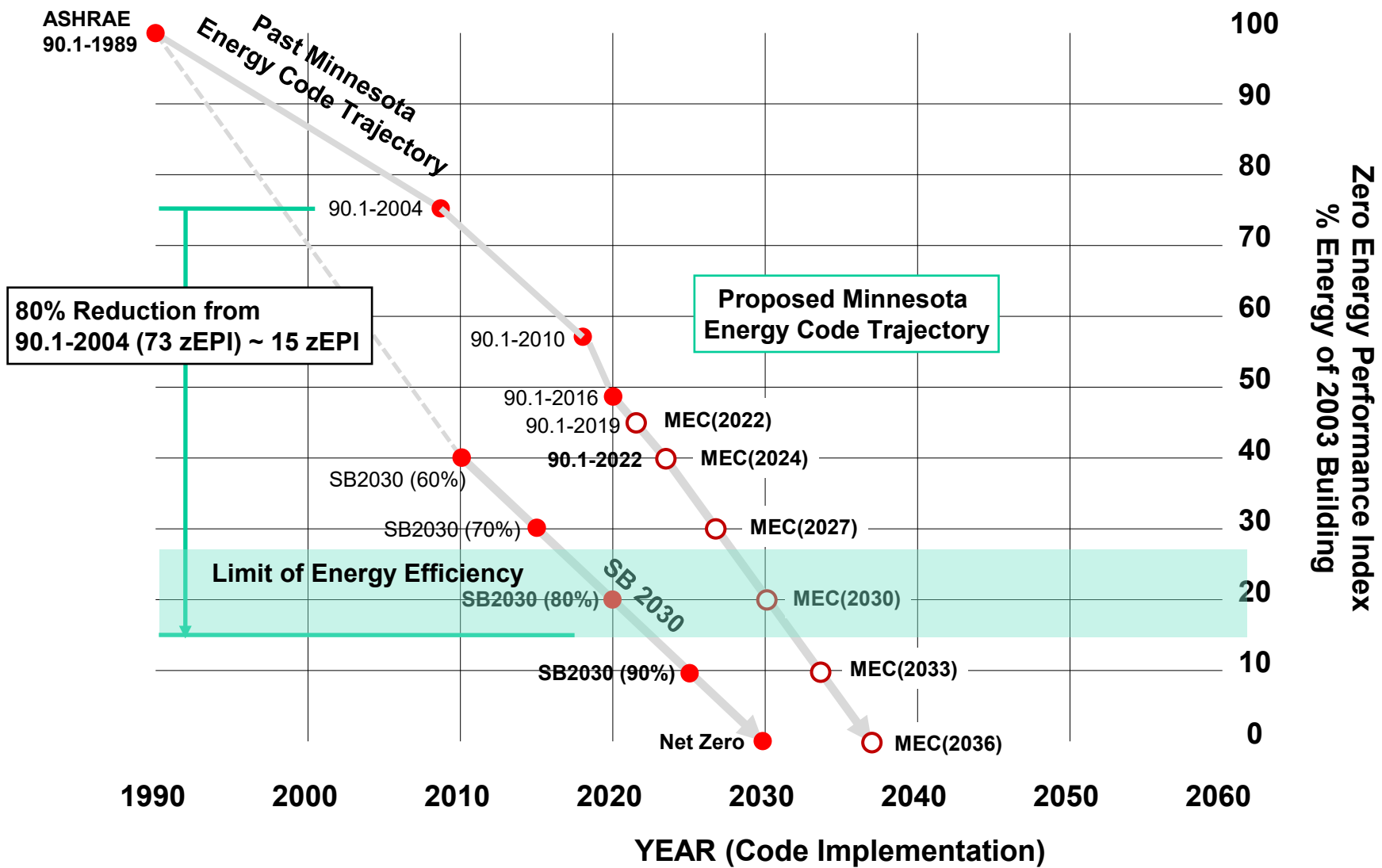


Proposed Minnesota Energy Code Trajectory



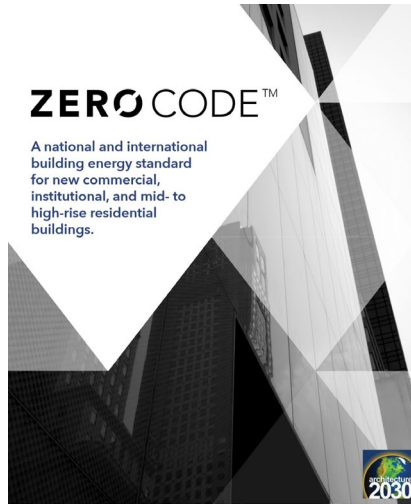
Based upon zEPI: Zero Performance Index for Energy Codes from the New Buildings Institute

Proposed Minnesota Energy Code Trajectory

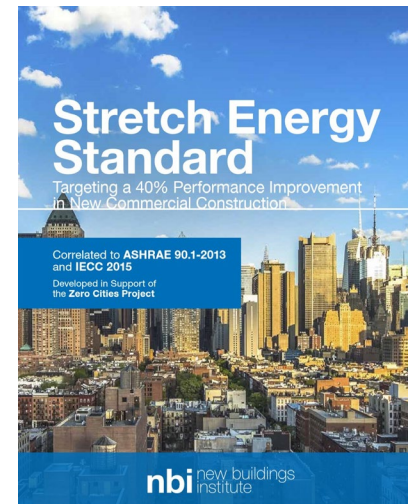


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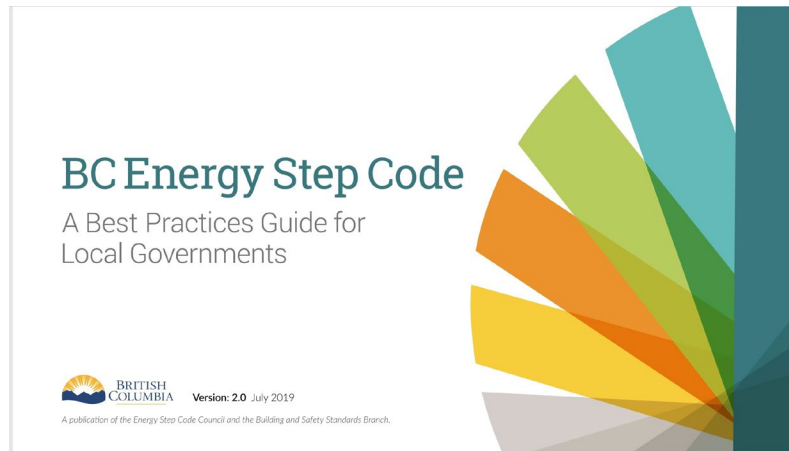
Other Programs



Architecture 2030 : Zero Code



New Buildings Institute: 40% Reach Standard



British Columbia: Step Code

zEPI* Scale to ZNE

National Milestones

CBECS** 2003 Average

100

90

80

70

60

50

40

30

20

10

0

ASHRAE 90.1-2004 _____ 73

ASHRAE 90.1-2010 _____ 57

ASHRAE 90.1-2013 _____ 52

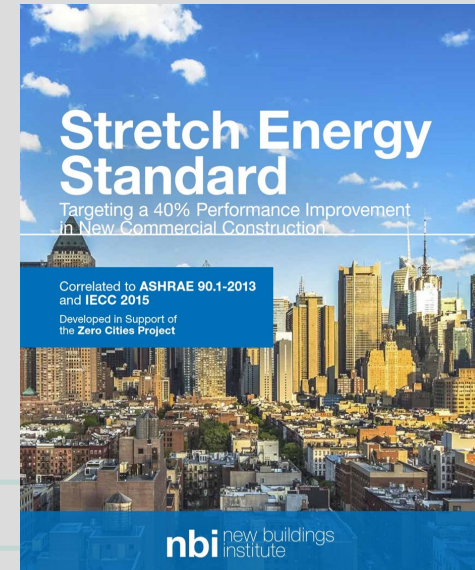
ASHRAE 90.1-2016 (49) - - - - -

NBI 20% Stretch Code (42) _____

**NBI 40% Reach (31) - - - - -
(5 to 10% Renewable Energy in Goal)**

**Additional Policies needed to get
To Zero**

Zero Net Energy



SB2030 60%: (2010-2014)

SB2030 70%: (2015-2019)

SB2030 80%: (2020-2024)

SB2030 90%: (2025)

Zero Net Energy

* zEPI-Zero Energy Performance Index

** CBECS-Commercial Buildings Energy Consumption Survey-U.S. Department of Energy

Base Image Source: New Buildings Institute

zEPI* Scale to ZNE

National Milestones

CBECS** 2003 Average

ASHRAE 90.1-2016 (49) - - - - -

**Add Energy Efficiency
Renewables and RECs to get to Zero**

Zero Net Energy

Base Image Source: New Buildings Institute



ZERO CODE™

A national and international building energy standard for new commercial, institutional, and mid- to high-rise residential buildings.



Current Minnesota Code

48.5: ASHRAE 90.1-2016 (IgCC 2018)

SB2030 60%: (2010-2014)

SB2030 70%: (2015-2019)

SB2030 80%: (2020-2024)

SB2030 90%: (2025)

Zero Net Energy

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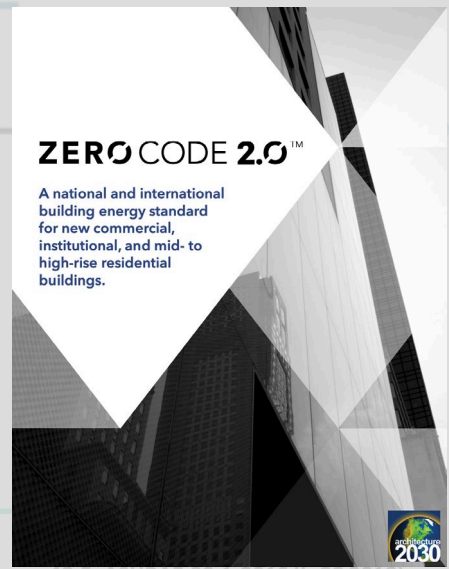
National Milestones

CBECS** 2003 Average

ASHRAE 90.1-2019 - - - - -

Calculated Target EE is lower and based on building type, fuel use, renewables with path to Net Zero

Base Image Source: New Buildings Institute



Zero Net Energy

* zEPI-Zero Energy Performance Index
 ** CBECS-Commercial Buildings Energy Consumption Survey-U.S. Department of Energy

zEPI* Scale to ZNE

National Milestones

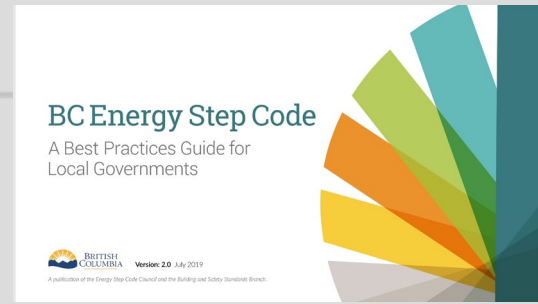
CBECS** 2003 Average

ASHRAE 90.1-2016 (49) - - - - -
BC Step 2022 (44) - - - - -
BC Step 2027 (39) - - - - -

BC Step 2032 (20) - - - - -
Passive House a Compliance Path

Additional Policies needed to get To Zero

Zero Net Energy



ASHRAE 90.1-2004 _____ 73

ASHRAE 90.1-2010 _____ 57

ASHRAE 90.1-2013 _____ 52

Arch 2030 Goal - 2015 _____

Arch 2030 Goal - 2025 _____

BC Energy Step Code

A Best Practices Guide for Local Governments

BRITISH COLUMBIA Version 2.0 July 2019
 A publication of the Energy Step Code Council and the Building and Safety Standards Branch

Current Minnesota Code

48.5: ASHRAE 90.1-2016 (IgCC 2018)

SB2030 60%: (2010-2014)

SB2030 70%: (2015-2019)

SB2030 80%: (2020-2024)

SB2030 90%: (2025)

Zero Net Energy

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** CBECS-Commercial Buildings Energy Consumption Survey-U.S. Department of Energy

Base Image Source: New Buildings Institute

British Columbia Step Code

PATHWAY TO 2032: PART 3 (WOOD-FRAME RESIDENTIAL)



British Columbia Step Code

Timeline for Energy Efficiency Regulatory Requirements in the BC Building Code

Here's what the province's CleanBC plan will mean for new-construction requirements.

2032

STEP 5

STEP 4

NET-ZERO ENERGY-READY

UP TO:

80%

2027*

STEP 4

STEP 3

40%

2022*

STEP 3

STEP 2

20%

* NEW TIMELINES



PART 9
BUILDINGS



PART 3
BUILDINGS

Energy-efficiency improvement
above 2018 BC Building Code
requirements

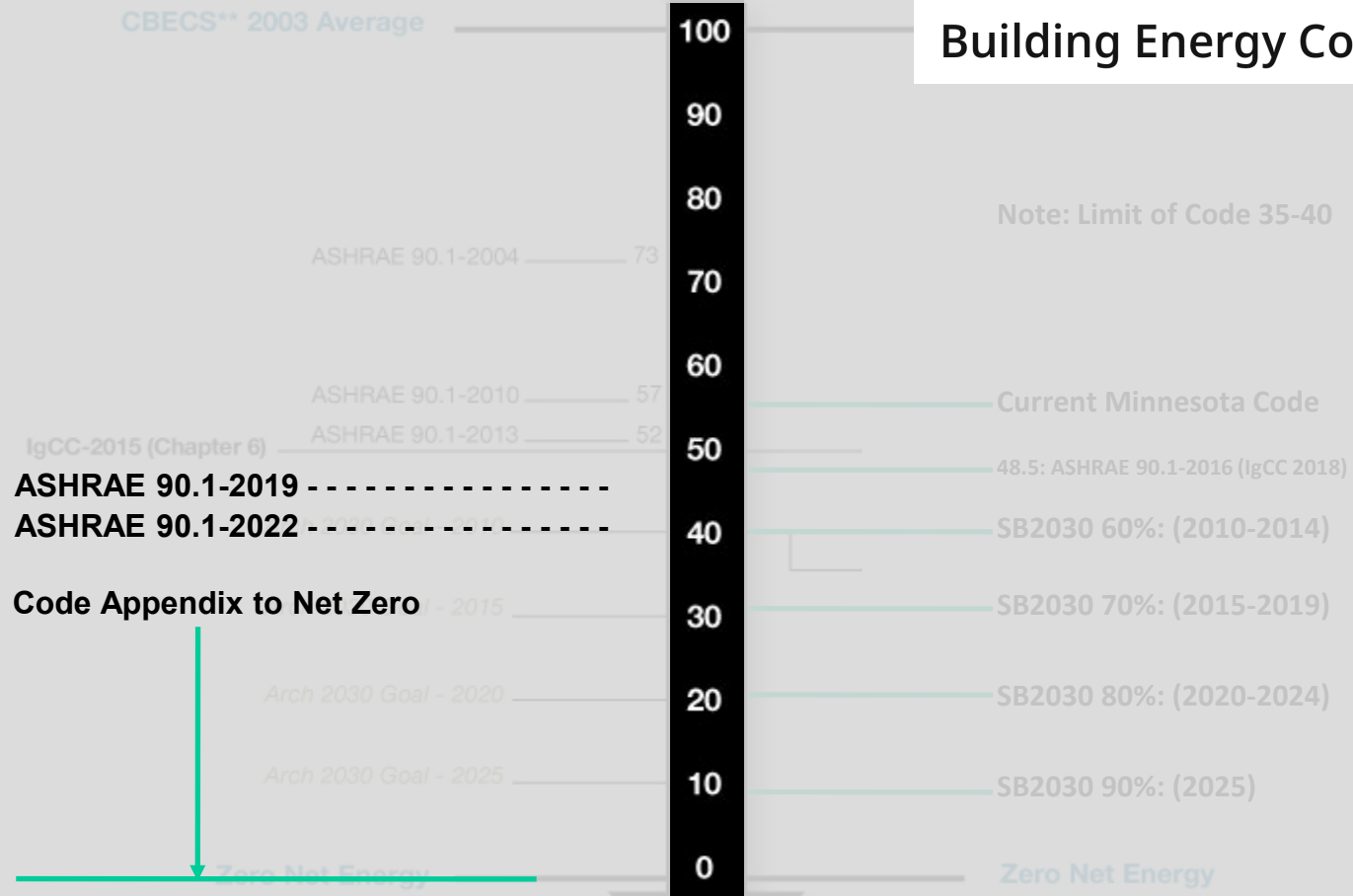
zEPI* Scale to ZNE



Building Energy Code

National Milestones

CBECS** 2003 Average



Note: Limit of Code 35-40

Current Minnesota Code

48.5: ASHRAE 90.1-2016 (IgCC 2018)

SB2030 60%: (2010-2014)

SB2030 70%: (2015-2019)

SB2030 80%: (2020-2024)

SB2030 90%: (2025)

Zero Net Energy

* zEPI-Zero Energy Performance Index

** CBECS-Commercial Buildings Energy Consumption Survey-U.S. Department of Energy

Base Image Source: New Buildings Institute

Massachusetts Energy + Stretch + Specialized Code

- **Updated Stretch Code** = IECC 2021 with MA amendments + Stretch Code amendments



Current Energy Code Options

- **Specialized Code** = IECC 2021 with MA amendments + Stretch Code amendments + Specialized Code appendices

Proposed Legislation – Adult Changing Tables – HF981

Greg Metz

CCAC Review and Comment	
Legislative and/or Code Information	
Bill number(s) description (if applicable) – Attach Bill language <u>SF 2536/HF 2135 Adult-Size Changing Facilities</u> <u>(n) Adult-size changing facilities. (1) The code must require the installation of adult-size changing facilities on each floor where there is a restroom accessible to the public. This requirement is met by providing adult-size changing facilities in either a unisex restroom or in both a men's restroom and a women's restroom. Adult-size changing facilities consist of:</u>	
<ul style="list-style-type: none"> <u>(i) an adult-size changing table in a private location;</u> <u>(ii) a supply of paper table liners and disinfectant wipes;</u> <u>(iii) an appropriately sized waste container for used supplies;</u> <u>(iv) nonslip flooring;</u> <u>(v) wall-mounted hooks and a shelf for a user's personal supplies;</u> <u>(vi) a chair for the user's attendant or caregiver; and</u> <u>(vii) signage indicating the presence of the adult-size changing facilities.</u> 	
<u>(2) Adult-size changing tables must have a changing surface that:</u>	
<ul style="list-style-type: none"> <u>(i) is a minimum of 24 inches wide and 71 inches long;</u> <u>(ii) either sits at or is capable of being adjusted to a height of between 18 and 28 inches above the floor;</u> <u>(iii) is weight-bearing to a minimum of 350 pounds; and</u> <u>(iv) has both a safety rail and restraint straps available.</u> 	
Subject/Building Code Section(s) Minnesota Rules, chapter 1341, Minnesota Accessibility Code Proposed Minnesota Statutes 326B.106 Subd. 4 (n)	
Technical Advisory Group (TAG)	
TAG Formed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Title of TAG: Building Code Series 1 TAG
TAG Members Scott McKown Irene Kao Charlie Vander Aarde Nick Erickson Brian Hoffman Kurt Welker Karen Gridley Barry Greive Simona Fischer John Smith Ken Hinz	Affiliations/Representing MN DLI/CCLD; Assistant Director League of Minnesota Cities Metro Cities Housing First Minnesota City of St. Louis Park; Association of MN Building Officials Welker Custom Homes; Builders Association of MN MN DLI/CCLD; Accessibility Specialist Target Corporation; Building Owners MSR Design; MN American Institute of Architects Michaud Cooley Erickson; Building Systems Design and Engineering Practices CBS Construction Services, Inc; Contractors

TAG Meeting Date(s) 11/9/2021; 11/23/2021; 12/7/2021; 12/21/21	
TAG Comments/Recommendations – Attachment <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<ol style="list-style-type: none"> TAG members support adoption of national model code requirements for adult changing tables through the rulemaking process that will adopt the 2024 "I" codes in lieu of the proposed statutory requirements. Placing technical requirements in statute limits the ability of designers, builders and building officials from proposing and approving alternative designs. The bill language conflicts with the intent of the State Building Code that buildings be designed to accommodate all persons with disabilities. The addition of a requirement for adult changing tables without any increase in the size of the restroom, will create barriers for other members of the disability community who use wheelchairs or other mobility devices. Adopting the national model code language reduces costs by only requiring adult changing tables in key locations and using existing requirements for family- and assisted-use restrooms. Accessibility advocates and subject-matter experts recommend regulating adult changing tables in the building code rather than through legislation to prevent inconsistency with the national standard. It is anticipated that the 2024 IBC will contain appropriate provisions for adult changing tables. TAG members do not recommend these proposed legislative changes. However, if the proposed bills move forward, they should be modified to include an effective date that allows 18-months for implementation and a sunset date, so the statute expires when the new building code with criteria for adult changing stations becomes effective. 	
Criteria Addressed (check all that apply)	
<input checked="" type="checkbox"/> Eliminating inconsistencies <input checked="" type="checkbox"/> Promoting coordination & consistency <input checked="" type="checkbox"/> Making rules easier to understand & apply	
<input checked="" type="checkbox"/> Streamlining construction regulation & construction procedures <input checked="" type="checkbox"/> Improving procedures within and among jurisdictions	
<input type="checkbox"/> Other:	
CCAC Comments & Recommendations	
A motion was made by Sprung, seconded by Guth, to approve the Technical Advisory Group Report on Adult-sized Changing Facilities. The roll call vote was unanimous with 17 votes in favor.	
Date of CCAC Meeting: January 20, 2022	
Prepared by/Name & Title Scott McLellan, Construction Codes Advisory Council Chair	Date January 21, 2022

Department's suggested change to HF981

n) **Adult-size changing facilities.** The commissioner shall adopt rules requiring adult-size changing facilities as part of the State Building Code.

Rulemaking authority language: The commissioner of the Department of Labor and Industry shall adopt rules, using the expedited rulemaking process in Minnesota Statutes, section 14.389, that set forth adult-size changing facilities to conform with the addition of Minnesota Statutes, Chapter 326B.106, subd. 4, subsection (n), under this act.