



DEPARTMENT OF ENERGY

10 CFR Part 431

[EERE-2017-BT-STD-0022]

RIN 1904-AE47

Energy Conservation Program: Energy Conservation Standards for Automatic Commercial Ice Makers

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notification of data availability and request for comment.

SUMMARY: On May 11, 2023, the U.S. Department of Energy (“DOE”) published a notice of proposed rulemaking (“NOPR”), in which DOE proposed new and amended energy conservation standards for automatic commercial ice makers. In this notification of data availability (“NODA”), DOE is updating its analysis for automatic commercial ice makers based on information DOE received related to harvest rate cutoffs in response to DOE’s May 11, 2023 NOPR. DOE requests comments, data, and information regarding the updated analysis.

DATES: DOE will accept comments, data, and information regarding this NODA no later than [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at www.regulations.gov under docket number EERE-2017-BT-STD-0022. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE-2017-BT-STD-0022, by any of the following methods:

- (1) *Email:* ACIM2017STD0022@ee.doe.gov. Include the docket number EERE-2017-BT-STD-0022 in the subject line of the message.

(2) *Postal Mail:* Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, Mailstop EE-5B, 1000 Independence Avenue, SW, Washington, DC, 20585-0121. Telephone: (202) 287-1445. If possible, please submit all items on a compact disc (“CD”), in which case it is not necessary to include printed copies.

(3) *Hand Delivery/Courier:* Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, 950 L’Enfant Plaza, SW, 6th Floor, Washington, DC, 20024. Telephone: (202) 287-1445. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

No telefacsimiles (“faxes”) will be accepted. For detailed instructions on submitting comments and additional information on this process, see section III of this document.

Docket: The docket for this activity, which includes *Federal Register* notices, comments, and other supporting documents/materials, is available for review at www.regulations.gov. All documents in the docket are listed in the www.regulations.gov index. However, not all documents listed in the index may be publicly available, such as information that is exempt from public disclosure.

The docket webpage can be found at www.regulations.gov/docket/EERE-2017-BT-STD-0022. The docket webpage contains instructions on how to access all documents, including public comments, in the docket. See section III of this document for information on how to submit comments through www.regulations.gov.

FOR FURTHER INFORMATION CONTACT:

Ms. Julia Hegarty, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE-5B, 1000 Independence Avenue, SW, Washington, DC, 20585-0121. Telephone: (202) 586-0729. Email: ApplianceStandardsQuestions@ee.doe.gov.

Ms. Kristin Koernig, U.S. Department of Energy, Office of the General Counsel,
GC-33, 1000 Independence Avenue, SW, Washington, DC, 20585-0121. Telephone:
(202) 586-3595. Email: *Kristin.Koernig@hq.doe.gov*.

For further information on how to submit a comment or review other public
comments and the docket, contact the Appliance and Equipment Standards Program staff
at (202) 287-1445 or by email: *ApplianceStandardsQuestions@ee.doe.gov*.

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I. Background

The Energy Policy and Conservation Act, Pub. L. 94-163, as amended (“EPCA”),¹ authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part C of EPCA² established the Energy Conservation Program for Certain Industrial Equipment. (42 U.S.C. 6311–6317) This includes automatic commercial ice maker (“ACIM”) equipment, the subject of this rulemaking.

On May 11, 2023, DOE published a NOPR (“May 2023 ACIM NOPR”) proposing to establish new and amended standards for automatic commercial ice makers. 88 FR 30508. DOE proposed that compliance with the new and amended standards would be required 3 years after the publication date of the final rule, should DOE finalize the proposed standards. 88 FR 30508, 30510. The technical support document (“TSD”) that presented the methodology and results of the May 2023 ACIM NOPR analysis is available at www.regulations.gov/document/EERE-2017-BT-STD-0022-0032.

On June 14, 2023, DOE held a public webinar (“June 2023 Public Webinar”) in which it presented a general overview of the topics addressed in this rulemaking, allowed time for prepared general statements by participants, and encouraged all interested parties to share their views on issues affecting this rulemaking.

Upon consideration of the views shared in the June 2023 Public Webinar and public comments DOE received in response to the May 2023 ACIM NOPR, DOE is considering changes to some of the equipment classes discussed in the May 2023 ACIM NOPR. This NODA presents alternative equipment classes under consideration as well as updated efficiency levels, life-cycle costs (“LCC”), payback periods (“PBP”), and

¹ All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Pub. L. 116-260 (Dec. 27, 2020), which reflects the last statutory amendments that impact Parts A and A-1 of EPCA.

² For editorial reasons, upon codification in the U.S. Code, Part C was redesignated Part A-1.

manufacturer impact analysis (“MIA”) results for these equipment classes. DOE is requesting comments, data, and information regarding the updated analysis.

DOE notes that it is continuing to consider all of the stakeholder comments received in response to the May 2023 ACIM NOPR and the June 2023 Public Webinar in further development of the rulemaking. Furthermore, as noted in the May 2023 ACIM NOPR, based on consideration of the public comments DOE receives in response to this document and related information collected and analyzed during the course of this rulemaking effort, DOE may adopt energy efficiency levels that are either higher or lower than the proposed standards, or some combination of level(s) that incorporate the proposed standards in part.

II. Discussion

In the following sections, DOE details its updated analysis for automatic commercial ice makers.

A. Engineering Analysis

1. Efficiency Analysis

DOE reviewed public comments from the June 2023 Public Webinar and in response to the May 2023 ACIM NOPR related to harvest rate cutoffs.

In this NODA, DOE updates the analysis for two directly analyzed equipment classes and two secondary equipment classes and creates four new secondary equipment classes as a result of the updated analysis in response to DOE’s review of comments related to harvest cutoff rates. These updated equipment classes are listed in Table II.1 and Table II.2. DOE also updates the map of secondary classes to the associated directly analyzed equipment class as presented in Table II.3 based on the new and updated equipment classes. DOE bases these updates on public comments DOE received in response to the May 2023 ACIM NOPR and the June 2023 Public Webinar. Specifically,

comments from the Air Conditioning, Heating, and Refrigeration Institute (“AHRI”)³ and Hoshizaki America, Inc., (“Hoshizaki”)⁴ indicated that a harvest rate of up to 1,500 pounds per day (“lb/day”) for automatic commercial ice makers using R-290 is not feasible in all cases for the 500-gram R-290 charge limit and that the baseline levels for automatic commercial ice makers, which DOE based on design changes made by manufacturers in response to the December 2022 EPA NOPR, are not consistent with testing on the equipment. In response to the May 2023 ACIM NOPR, AHRI and Hoshizaki stated that some manufacturer design plans are speculating at 1,000 lb/day for batch type ice makers and 1,200 lb/day for continuous type ice makers. (AHRI, No. 50 at p. 5; Hoshizaki, No. 47 at p. 3)⁵ Hoshizaki commented in the June 2023 Public Webinar that Hoshizaki’s research and work towards switching condensers points to 1,000 lb/day for batch type ice makers and 1,200 lb/day for continuous type ice makers rather than the harvest rate of up to 1,500 pounds per day lb/day in the May 2023 ACIM NOPR. (Hoshizaki, No. 55 at pp. 20-21) Hoshizaki suggested that the May 2023 ACIM NOPR should be reviewed for this discrepancy and reflect curves that will meet these criteria and allow for achievable standards. (Hoshizaki, No. 47 at p. 3)

After consideration of these public comments, DOE has updated the May 2023 ACIM NOPR analysis to reflect the harvest rate cutoff for R-290 at 1,000 lb/day for batch type ice makers and 1,200 lb/day for continuous type ice makers.

³ See www.regulations.gov/comment/EERE-2017-BT-STD-0022-0050.

⁴ See www.regulations.gov/comment/EERE-2017-BT-STD-0022-0047 for comments in response to the May 2023 ACIM NOPR. See www.regulations.gov/document/EERE-2017-BT-STD-0022-0055 for comments provided in the June 2023 Public Webinar.

⁵ The parenthetical reference provides a reference for information located in the docket of DOE’s rulemaking to develop energy conservation standards for automatic commercial ice makers. (Docket No. EERE-2017-BT-STD-0022, which is maintained at www.regulations.gov). The references are arranged as follows: (commenter name, comment docket ID number, page of that document).

Table II.1 Batch Equipment Classes Analyzed in this NODA

Equipment Type	Condenser Cooling Type	Harvest Rate <i>lb/24 hours</i>	Directly Analyzed Equipment Class
Ice-Making Head	Water	≥ 785 and $\leq 1,000$	
		$> 1,000$ and $< 1,500$	✓
	Air	≥ 727 and $\leq 1,000$	
		$> 1,000$ and $< 1,500$	✓

Table II.2 Continuous Equipment Classes Analyzed in this NODA

Equipment Type	Condenser Cooling Type	Harvest Rate <i>lb/24 hours</i>	Directly Analyzed Equipment Class
Ice-Making Head	Water	≥ 801 and $\leq 1,200$	
		$> 1,200$ and $< 1,500$	
	Air	≥ 820 and $\leq 1,200$	
		$> 1,200$ and $< 1,500$	

Table II.3 Map of Secondary Classes to the Associated Directly Analyzed Equipment Class in this NODA

Secondary Equipment Class	Associated Directly Analyzed Equipment Class
B-IMH-W (≥ 785 and $\leq 1,000$)	B-IMH-W (≥ 300 and < 785)
B-IMH-W ($\geq 1,500$ and $< 2,500$)	B-IMH-W ($> 1,000$ and $< 1,500$)
B-IMH-W ($\geq 2,500$ and $< 4,000$)	B-IMH-W ($> 1,000$ and $< 1,500$)
B-IMH-A (≥ 727 and $\leq 1,000$)	B-IMH-A (≥ 300 and < 727)
B-IMH-A ($\geq 1,500$ and $< 4,000$)	B-IMH-A ($> 1,000$ and $< 1,500$)
C-IMH-W (≥ 801 and $\leq 1,200$)	C-IMH-W (> 50 and < 801)
C-IMH-W ($> 1,200$ and $< 1,500$)	C-IMH-W (> 50 and < 801)
C-IMH-A (≥ 820 and $\leq 1,200$)	C-IMH-A (≥ 310 and < 820)
C-IMH-A ($> 1,200$ and $< 1,500$)	C-IMH-A (≥ 310 and < 820)

DOE requests comment on the equipment class and secondary mapping updates in this NODA.

a. Baseline Energy Use

For this NODA, DOE updates the baseline for the two directly analyzed equipment classes shown in Table II.4. For these classes, DOE considers the current standards as the baseline energy use instead of an energy use reduction below the DOE energy conservation standard because DOE has tentatively determined that a harvest rate

of up to 1,500 lb/day for automatic commercial ice makers using R-290 is not feasible in all cases. Consistent with the May 2023 ACIM NOPR, DOE expects that the baseline level for these equipment classes is equal to the current DOE ACIM energy conservation standard level, and that equipment costs and manufacturer investments required to comply with the refrigerant restrictions proposed in the U.S. Environmental Protection Agency’s NOPR published on December 15, 2022 (*see* 87 FR 76738) will be in effect prior to the time of compliance for the proposed amended DOE ACIM standards.

Table II.4 Baseline Energy Use of Directly Analyzed Classes in this NODA

Directly Analyzed Equipment Class	Representative Harvest Rate	Energy Use Reduction Below DOE Standard
B-IMH-W (>1,000 and <1,500)	1470	0%
B-IMH-A (>1,000 and <1,500)	1331	0%

DOE requests comment on the baseline energy use updates in this NODA.

b. Higher Efficiency Levels

For the two directly analyzed classes presented in Table II.1, DOE maintains the same design options, design option energy use reduction methodology, and design option cost methodology as the May 2023 ACIM NOPR. *See* 87 FR 30508, 30534-30535.

B. Efficiency Levels

Table II.5 and Table II.6 present the results of the NODA engineering analysis for each directly analyzed equipment class.

Table II.5 Cost-Efficiency Results for B-IMH-W (>1,000 and <1,500)

Energy Consumption <i>kWh/100 lb</i>	% Energy Use Reduction (from Baseline)	Manufacturer Production Cost	Manufacturer Selling Price	Design Option Change
4.01	0.0%	\$2,125.34	\$2,656.68	
4.01	0.1%	\$2,136.81	\$2,671.01	SPM -> PSC Pump Motor
3.85	4.0%	\$2,406.81	\$3,008.51	Drain Water Heat Exchanger
3.85	4.2%	\$2,446.47	\$3,058.09	PSC -> ECM Pump Motor

Representative Harvest Rate = 1470 lb/24 hours

Table II.6 Cost-Efficiency Results for B-IMH-A (>1,000 and <1,500)

Energy Consumption <i>kWh/100 lb</i>	% Energy Use Reduction (from Baseline)	Manufacturer Production Cost	Manufacturer Selling Price	Design Option Change
4.71	0.0%	\$2,052.12	\$2,565.16	
4.56	3.3%	\$2,080.20	\$2,600.25	SPM -> PSC Condenser Fan Motor
4.38	7.0%	\$2,187.52	\$2,734.40	PSC -> ECM Condenser Fan Motor
4.34	8.0%	\$2,219.29	\$2,774.11	Tube & Fin to Microchannel Condenser
4.33	8.1%	\$2,230.75	\$2,788.44	SPM -> PSC Pump Motor
4.18	11.4%	\$2,500.75	\$3,125.94	Drain Water Heat Exchanger
4.17	11.5%	\$2,540.41	\$3,175.52	PSC -> ECM Pump Motor

Representative Harvest Rate = 1470 lb/24 hours

DOE requests comment on the efficiency levels presented in this NODA.

C. Shipments Analysis

This NODA uses the same volume of shipments as the May 2023 ACIM NOPR. See 88 FR 30508, 30544-30545. However, with the equipment class restructuring, shipment volumes for affected equipment classes were redistributed as applicable to the equipment class changes.

D. Life-Cycle Cost and Payback Period Analysis

DOE conducted LCC and PBP analyses to evaluate the economic impacts on individual consumers of potential energy conservation standards for automatic commercial ice makers presented in this NODA. For this NODA analysis, DOE uses the same inputs and assumptions as in the May 2023 ACIM NOPR LCC analysis (*see* 88 FR 30508, 30539-30540), including using the Annual Energy Outlook 2022 (“*AEO2022*”)⁶ for energy price projections. Details of the analysis inputs and methodology are available in chapter 8 of the TSD for the May 2023 ACIM NOPR analysis.⁷ Subsequent rulemaking analyses will be updated with the most recent data releases (*e.g.*, *AEO2023*).

As stated in the May 2023 ACIM NOPR, DOE’s LCC analysis considers the projected distribution (market shares) of equipment efficiencies under the no-new-standards case (*i.e.*, the case without amended or new conservation standards). 88 FR 30508, 30539. As part of the equipment class restructuring of this NODA, the efficiency distributions also changed. The estimated market shares of this NODA for the no-new-standards case for automatic commercial ice makers are shown in Table II.7.⁸ The efficiency level distribution values were developed by a review of the DOE Compliance Certification Database (“*CCD*”).⁹ This NODA uses the same CCD data set that was used in the May 2023 ACIM NOPR. Manufacturers are required to submit their data annually on August 1 to CCD to certify compliance. Although this NODA publishes after the most recent annual reporting date, using a revised distribution dataset based on the latest certifications could change other values not part of this NODA. DOE sorted the portion

⁶ Available at www.eia.gov/outlooks/aeo/index.php.

⁷ Available at www.regulations.gov/document/EERE-2017-BT-STD-0022-0036.

⁸ In the May 2023 ACIM NOPR, this was Table IV.10.

⁹ Department of Energy–Office of Energy Efficiency and Renewable Energy. *U.S. Department of Energy’s Compliance Certification Database*. Available at [www.regulations.doe.gov/certification-data/#q=Product_Group_s%3A*\(Ice Makers – Automatic Commercial\)](http://www.regulations.doe.gov/certification-data/#q=Product_Group_s%3A*(Ice%20Makers%20-%20Automatic%20Commercial)).

of equipment in CCD that corresponds with energy use values from the engineering analysis.

Table II.7 Efficiency Level Distribution Within Each Equipment Class in No-New-Standards Case for Automatic Commercial Ice Makers¹⁰

Equipment Class	EL 0	EL 1	EL 2	EL 3	EL 4	EL 5	EL 6	EL 7
B-IMH-W (≥ 300 and < 785)	37%	11%	0%	52%	0%	0%	0%	0%
B-IMH-W ($> 1,000$ and $< 1,500$)	10%	24%	0%	67%	0%	0%	0%	0%
B-IMH-A (≥ 300 and < 727)	24%	0%	12%	0%	30%	0%	34%	0%
B-IMH-A ($> 1,000$ and $< 1,500$)	59%	12%	0%	0%	26%	0%	3%	0%
B-RC(NRC)-A (≥ 988 and $< 4,000$)	20%	0%	36%	0%	0%	0%	43%	0%
B-SC-A (Portable ACIM) (≤ 38)	67%	11%	11%	11%	0%	0%	0%	0%
B-SC-A (Refrigerated Storage ACIM)	82%	6%	6%	6%	0%	0%	0%	0%
B-SC-A (≤ 50)	30%	10%	10%	10%	10%	10%	10%	10%
B-SC-A (> 50 and < 134)	71%	2%	2%	2%	2%	0%	22%	0%
B-SC-A (≥ 200 and $< 4,000$)	91%	0%	0%	0%	4%	0%	4%	0%
C-IMH-W (> 50 and < 801)	91%	0%	9%	0%	0%	0%	0%	0%
C-IMH-A (≥ 310 and < 820)	40%	2%	18%	5%	0%	35%	0%	0%
C-RC&RC-A (≥ 800 and $< 4,000$)	50%	17%	0%	0%	0%	33%	0%	0%
C-SC-A (> 50 and < 149)	91%	0%	0%	2%	0%	6%	0%	0%
C-SC-A (≥ 149 and < 700)	71%	0%	18%	0%	0%	10%	0%	0%

In the May 2023 ACIM NOPR, DOE published a series of tables (V.3 through V.32) depicting the LCC and PBP for the trial standard levels (“TSLs”) considered for each equipment class. 88 FR 30508, 30560-30567. In the second table, impacts are measured relative to the efficiency distribution in the no-new-standards case in the compliance year (2027). Because some consumers purchase equipment with higher efficiency in the no-new-standards case, the average savings are less than the difference between the average LCC of the baseline equipment and the average LCC at each TSL.

Id.

¹⁰ To compare these NODA MIA results to the May 2023 ACIM NOPR MIA results, refer to Table V.10 in the May 2023 ACIM NOPR.

The results of this NODA analysis are presented in Table II.8 through Table II.11. In the first of each pair of tables, the simple payback is measured relative to the baseline equipment. In the second table, impacts are measured relative to the efficiency distribution in the no-new-standards case in the compliance year (see section II.C of this document). Because some consumers purchase equipment with higher efficiency in the no-new-standards case, the average savings are less than the difference between the average LCC of the baseline equipment and the average LCC at each efficiency level. The savings refer only to consumers who are affected by a standard at a given efficiency level. Those who already purchase equipment with an efficiency at or above a given efficiency level are not affected. Consumers for whom the LCC increases at a given efficiency level experience a net cost.

Table II.8 Average LCC and PBP Results for B-IMH-W (>1,000 and <1,500)¹¹

TSL	Efficiency Level	Average Costs 2022\$				Simple Payback years	Average Lifetime years
		Installed Cost	First Year's Operating Cost	Lifetime Operating Cost	LCC		
--	Baseline					--	
1	0	\$5,747.89	\$6,690.38	\$48,928.54	\$54,676.44	0.0	8.5
2	0	\$5,747.89	\$6,690.38	\$48,928.54	\$54,676.44	0.0	8.5
3	0	\$5,747.89	\$6,690.38	\$48,928.54	\$54,676.44	0.0	8.5
4	3	\$6,283.96	\$6,646.28	\$48,622.68	\$54,906.63	12.2	8.5

Note: The results for each TSL are calculated assuming that all consumers use equipment at that efficiency level. The PBP is measured relative to the baseline equipment.

Table II.9 Average LCC Savings Relative to the No-New-Standards Case for B-IMH-W (>1,000 and <1,500)¹²

TSL	Efficiency Level	Life-Cycle Cost Savings	
		Average LCC Savings*, ** 2022\$	Percent of Consumers that Experience Net Cost
1	0	\$0.00	0%
2	0	\$0.00	0%

¹¹ Table II.8 corresponds with Table V.5 from the May 2023 ACIM NOPR. This NODA presents new harvest range and the related values from the harvest range change.

¹² Table II.9 corresponds with Table V.6 from the May 2023 ACIM NOPR. This NODA presents new harvest range and the related values from the harvest range change.

TSL	Efficiency Level	Life-Cycle Cost Savings	
		Average LCC Savings*, ** 2022\$	Percent of Consumers that Experience Net Cost
3	0	\$0.00	0%
4	3	(\$227.40)	31%

*Values in parentheses are negative numbers.

** The savings represent the average LCC for affected consumers.

Table II.10 Average LCC and PBP Results for B-IMH-A ($\geq 1,000$ and $< 1,500$)¹³

TSL	Efficiency Level	Average Costs 2022\$				Simple Payback years	Average Lifetime years
		Installed Cost	First Year's Operating Cost	Lifetime Operating Cost	LCC		
--	Baseline					--	
1	1	\$5,602.02	\$2,429.82	\$17,168.02	\$22,770.04	1.3	8.5
2	2	\$5,738.78	\$2,388.52	\$16,921.62	\$22,660.40	2.4	8.5
3	4	\$5,861.72	\$2,376.04	\$16,835.03	\$22,696.75	3.4	8.5
4	6	\$6,378.01	\$2,337.78	\$16,569.66	\$22,947.67	6.4	8.5

Note: The results for each TSL are calculated assuming that all consumers use equipment at that efficiency level. The PBP is measured relative to the baseline equipment.

Table II.11 Average LCC Savings Relative to the No-New-Standards Case for B-IMH-A ($\geq 1,000$ and $< 1,500$)¹⁴

TSL	Efficiency Level	Life-Cycle Cost Savings	
		Average LCC Savings*, ** 2022\$	Percent of Consumers that Experience Net Cost
1	1	\$193.03	0%
2	2	\$269.97	3%
3	4	\$232.99	10%
4	6	(\$81.06)	71%

*Values in parentheses are negative numbers.

** The savings represent the average LCC for affected consumers.

This NODA only presents changes compared to the May 2023 ACIM NOPR. No changes occurred in Tables V.19 through V.32 of the May 2023 ACIM NOPR and, thus, those equipment classes are not presented in this NODA.

¹³ Table II.10 corresponds with Table V.9 from the May 2023 ACIM NOPR. This NODA presents new harvest range and the related values from the harvest range change.

¹⁴ Table II.11 corresponds with Table V.9 from the May 2023 ACIM NOPR. This NODA presents new harvest range and the related values from the harvest range change.

E. Manufacturer Impact Analysis

DOE presents the Government Regulatory Impact Model (“GRIM”) results analyzing the impacts of the updated analysis discussed in this NODA. The GRIM results summarize the estimated financial impacts of potential new and amended energy conservation standards on manufacturers of ACIM equipment, as well as the conversion costs that DOE estimates manufacturers of ACIM equipment would incur at each TSL. The methodology and assumptions used in the MIA did not change from the May 2023 ACIM NOPR except for the analytical changes previously described in prior sections (*i.e.*, updates stemming from revisions to the R-290 harvest rate cutoffs,¹⁵ changes to equipment class harvest rates to accommodate the new harvest rate cutoffs, and the equipment class mapping of primary and secondary equipment classes). Table II.12 presents the MIA results. Details of the MIA inputs and methodology are available in chapter 12 of the TSD for the May 2023 ACIM NOPR.¹⁶

Table II.12 Manufacturer Impact Analysis Results¹⁷

	Unit	No-New-Standards Case	TSL 1	TSL 2	TSL 3	TSL 4
INPV	2022\$ Million	95.9	90.2 to 90.9	87.5 to 88.9	80.5 to 82.9	52.7 to 71.3
Change in INPV*	%	-	(6.0) to (5.2)	(8.7) to (7.3)	(16.0) to (13.6)	(45.1) to (25.7)
Free Cash Flow (2026)	2022\$ Million	9.4	7.1	6.1	2.8	(2.4)
Change in Free Cash Flow (2026)*	%	-	(24.3)	(35.4)	(70.0)	(126.0)
Equipment Conversion Costs	2022\$ Million	-	4.6	7.0	11.9	20.5
Capital Conversion Costs	2022\$ Million	-	1.8	2.4	6.1	11.6
Total Conversion Costs	2022\$ Million	-	6.4	9.4	18.0	32.1

*Parentheses denote negative (-) values.

¹⁵ The R-290 harvest rate cutoff for batch automatic commercial ice makers was revised to 1,000 lb/day from 1,500 lb/day. The R-290 harvest rate cutoff for continuous automatic commercial ice makers was revised to 1,200 lb/day from 1,500 lb/day.

¹⁶ Available at www.regulations.gov/document/EERE-2017-BT-STD-0022-0032.

¹⁷ To compare these NODA MIA results to the May 2023 ACIM NOPR MIA results, refer to Table V.40 in the May 2023 ACIM NOPR.

F. National Impact Analysis

This NODA uses the same volume of shipments as the May 2023 ACIM NOPR. See 88 FR 30508, 30578. However, with the equipment class restructuring, shipment volumes for affected equipment classes were redistributed as applicable to the equipment class changes.

G. Energy Use Equations

Based on the updated analysis presented in this NODA, DOE has updated the proposed energy use equations in Table II.13 and Table II.14.

Table II.13 Batch Type Ice Makers

Equipment Type	Type of Cooling	Harvest Rate <i>lb ice/24 hours</i>	Maximum Energy Use* <i>kWh/100 lb ice</i>
Ice-Making Head	Water	≥ 785 and $\leq 1,000$	4.13-0.00028H
Ice-Making Head	Water	$> 1,000$ and $< 1,500$	4.42-0.00028H
Ice-Making Head	Air	≥ 727 and $\leq 1,000$	5.09-0.00063H
Ice-Making Head	Air	$> 1,000$ and $< 1,500$	5.17-0.00063H

* H = harvest rate in pounds per 24 hours, indicating the energy use for a given harvest rate.

Table II.14 Continuous Type Ice Makers

Equipment Type	Type of Cooling	Harvest Rate <i>lb ice/24 hours</i>	Maximum Energy Use* <i>kWh/100 lb ice</i>
Ice-Making Head	Water	≥ 801 and $\leq 1,200$	4.10
Ice-Making Head	Water	$> 1,200$ and $< 1,500$	4.34
Ice-Making Head	Air	≥ 820 and $\leq 1,200$	3.91
Ice-Making Head	Air	$> 1,200$ and $< 1,500$	4.67

* H = harvest rate in pounds per 24 hours, indicating the energy use for a given harvest rate.

DOE requests comment on the energy use equations presented in this NODA.

III. Public Participation

DOE requests comment on the updated equipment classes, efficiency levels, no-new-standards case market shares, LCC, PBP, and MIA results, and energy use equations for automatic commercial ice makers presented in this NODA. As noted in the May 2023 ACIM NOPR, DOE may adopt energy efficiency levels that are either higher or lower

than the proposed standards, or some combination of level(s) that incorporate the proposed standards in part.

DOE will accept comments, data, and information regarding this NODA no later than the date provided in the **DATES** section at the beginning of this document.

Interested parties may submit comments, data, and other information using any of the methods described in the **ADDRESSES** section at the beginning of this document.

Submitting comments via www.regulations.gov. The www.regulations.gov webpage will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment itself or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Otherwise, persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to www.regulations.gov information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (“CBI”)). Comments submitted through www.regulations.gov cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, *see* the Confidential Business Information section.

DOE processes submissions made through *www.regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *www.regulations.gov* provides after you have successfully uploaded your comment.

Submitting comments via email, hand delivery/courier, or postal mail. Comments and documents submitted via email, hand delivery/courier, or postal mail also will be posted to *www.regulations.gov*. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via postal mail or hand delivery/courier, please provide all items on a CD, if feasible, in which case it is not necessary to submit printed copies. No faxes will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, that are written in English, and that are free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: one copy of the document marked “confidential” including all the information believed to be confidential, and one copy of the document marked “non-confidential” with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE’s policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

Signing Authority

This document of the DOE was signed on September 19, 2023, by Jeffrey Marootian, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the DOE. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC, on September 19, 2023.

Treena V. Garrett,

Federal Register Liaison Officer,

U.S. Department of Energy.

