Under the IRA, the full Sec. 48 ITC will be available to qualifying CHP system property that begins construction before January 1, 2025 (please note there are capacity, efficiency, and other limitations that will continue to apply for CHP eligibility). The IRA defines CHP as an ‘energy property’ and WHP as ‘waste energy recovery property’ under paragraph (3)(A) and clause (v) of the Sec. 48 energy credit, respectively. For full text of the Sec. 48 as amended by the IRA, please refer here.[1]

The Sec. 48 ITC base credit rate is 6%. Projects can increase the base rate by a 5x multiplier (30%) by meeting or being exempt from the prevailing wage and apprenticeship requirements.

The IRA provides a bonus credit of up to 10% for meeting requirements for domestic content, and a bonus credit of up to 10% for projects located in “energy communities.” These requirements cannot be used towards reaching the 30% bonus rate, which is only attained by satisfying (or being exempt from) the labor requirements (prevailing wage and apprenticeships).

CHP projects that begin construction after December 31, 2024, can qualify for renewable energy tax credits under the new technology-neutral Sec. 45Y PTC or Sec. 48E ITC, if the project yields zero greenhouse gas emissions.

This factsheet continues with several sections that address the above listed topics and covers Direct Pay, IRS Guidance, Hydrogen tax credits, the Advanced Manufacturing tax credit, and other areas of interest for our membership and the broader CHP industry.
QUICK GUIDE FOR ITC REQUIREMENTS IN 2023 AND 2024

30%
- Placed in Service between 1/1/23 and 12/31/24
- Meet (or receive exemption from) labor requirements (apprenticeships and prevailing wage)

40%
- Placed in Service between 1/1/23 and 12/31/24
- Meet (or receive exemption from) labor requirements (apprenticeships and prevailing wage)
- Project that: is located in an “energy community” OR meets domestic content requirements

50%
- Placed in Service between 1/1/23 and 12/31/24
- Meet (or receive exemption from) labor requirements (apprenticeships and prevailing wage)
- Project that: is located in an “energy community” AND meets domestic content requirements
**PROJECT QUALIFICATIONS**

What happens for projects that commenced construction in 2022 prior to President Biden signing the IRA into law—can those projects claim 30%?

In general, yes, as long as the project was not placed in service in 2022 or earlier. Getting to 30% depends on meeting the prevailing wage and apprentice requirements or being exempt from those requirements. Projects that begin construction prior to 60 days after the IRS issues guidance on the prevailing wage and apprentice requirements are exempt from those requirements.[2] The amendments placing CHP under the 30% credit **apply to property placed in service after December 31, 2022**. So, this increased credit would not apply to projects placed in service in 2022 or earlier.

There are some IRA provisions, for example, on transferability (see below), that allow actions 180 days after enactment. The 180 day provision applies to when the taxpayer is allowed to make an election to transfer the credit, which may not need to be the same as the placed-in-service date. The property would be eligible for the credit if placed in service after January 1, 2023, but the taxpayer can’t make the election to transfer until on or after February 12, 2023.

“(e) LIMITATIONS ON ELECTION.— “(1) TIME FOR ELECTION.—An election under subsection (a) to transfer any portion of an eligible credit shall be made not later than the due date (including extensions of time) for the return of tax for the taxable year for which the credit is determined, but in no event earlier than 180 days after the date of the enactment of this section. Any such election, once made, shall be irrevocable.” (see p. 194).

**Do you have to procure the prime mover as part of the 5% requirement? Or could you buy other equipment (electrical equipment, etc.)?**

The 5% safe harbor applies to the “total cost of the facility,” which the IRS defines as “all costs properly included in the depreciable basis of the facility.” This does not include land or any property not integral to the facility. Please refer to IRS Notice 2013-29,[3] and subsequent amending notices for further details.

**Can a ≤ 15 MW fossil CHP project qualify for greater than 30%?**

The total capacity limitation under Section 48 is 50 MW. However, for systems over 15 MW, the tax credit must bear “the same ratio to such credit as the applicable capacity [15 MW] bears to the capacity of such property” (see sec. 48(c)(3)(B)).[4] Depending on the system size, which affects this ratio, there may be a way of using the bonus credits for domestic content and/or energy communities to get to over 30% of the total project cost despite the limitations.

Under the zero-emission, technology neutral regime, these capacity limitations do not apply. The challenge becomes qualifying as a zero-emission technology.
PROJECT QUALIFICATIONS

What if a project is landfill gas with no heat recovery? Would that qualify?

Landfill gas projects are eligible under Sec. 45 (PTC), which may be a better fit and allows taxpayers to choose an ITC in lieu of the PTC.

We’ve read that projects that start construction before “60 days after the date the IRS provides guidance” can be exempt from the prevailing wage and apprenticeship requirements and still receive the 30% ITC. Is this true and is the date of the IRS providing guidance considered the date when the IRA was passed, or, is it some date in the future (if in future, is it possible to elaborate when this date may be)?

First, there is such a provision in the IRA.

As mentioned above, the latest guidance on prevailing wage and apprenticeship requirements was released on November 29, 2022 and published in the Federal Register on Nov. 30, 2022. Therefore, the new labor requirements will apply to facilities/projects that commence construction on or after Jan. 30, 2023.

Does the ITC apply to replacement projects whereby a very old CHP system is removed and replaced?

In Notice 2018–59,[5] the IRS established the 80/20 rule for retrofitted property, which allows energy property to qualify as originally placed in service even though it contains some used property—provided used property is not more than 20% of the total value of the energy property.

Do you know the various exchanges that members can deploy to sell their ITCs? Is there any formal due diligence around having to transfer the ITC to another entity?

As far as we know, these have not been established yet—but we anticipate such exchanges will be created to facilitate transfers.

Can the new ITC be applied to projects installed outside the USA with equipment being purchased in 2023 / 2024 and operations starting in 2025?

No. Projects must be located in the U.S.
**PROJECT QUALIFICATIONS**

If a tax payer orders CHP equipment and starts construction in 2022 but the CHP plant will not be in operation until 2023, can they claim the 30% ITC on their 2022 taxes or do they have to wait until their 2023 taxes? If the tax payer can claim the 30% ITC on their 2022 taxes, would this be for the entire applicable cost of the project, or only for costs incurred in the 2022 tax year?

The credits are claimed on the tax return after the project is placed in service. The start of construction is only to ensure eligibility later on.

**BONUS CREDITS**

*Bonus credits are available for meeting the domestic content requirements and for placing projects in energy communities.*

*The bonus credit is 10% of the PTC credit amount, or 10 percentage points of the ITC for each category – so a project could receive an additional 10% if it is in an energy community, and an additional 10% if it meets domestic content requirements.*

What is the maximum ITC value for CHP? Is that 30%?

Bonus credits (see below) can allow taxpayers to claim an additional 10% (if labor requirements are met) for projects using sufficient domestic content and/or being located in “energy communities.”

Is there a bonus credit for low-income communities?

There is an allocated tax credit for wind and solar projects under 5 MW for low-income communities. However, other technologies are not eligible.

There are bonus credits for meeting the domestic content requirements, and projects located in “energy communities” [areas currently or formerly heavily dependent on fossil energy for jobs/tax base] that CHP and WHP can be eligible for.
**Is there any current definition of what qualifies as a "brownfield" site?**

Yes. A limited set of brownfield sites qualify as "energy communities" under the IRA. To be an energy community, a brownfield site must be “as defined in subparagraphs (A), (B), and (D)(ii)(III)” of section 101(39) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601(39)) (see below).[6] Subparagraph (A) is the general definition of a “brownfield site.” Subparagraph (B) outlines exclusions related to administrative orders, removal actions, corrective actions, and national priority sites. Subparagraph (D)(ii)(III) “is mine scarred land” listed under “additional areas.” The inclusion of the word “and” with respect to the subparagraphs in section 101(39) makes this provision of the IRA somewhat confusing. The CHP Alliance, and other organizations, have requested the IRS work with EPA to clarify which brownfields are eligible.

The EPA has mapping and data tools to identify types of Brownfield sites.[7]

**Does repowering an old CHP plant at a currently operating commercial or industrial site with a new CHP plant qualify under “brownfield” section the Energy Community Bonus credit?**

As described above, the brownfield provision needs additional guidance to definitively identify eligible brownfield areas. In addition, the normal terms of the tax credit apply, so only new property would be eligible. Repowering is a subject that is more fully explored by the 80/20 rule.[8]

**How does a taxpayer verify that they meet the Energy Community Bonus Credit? There are some specific thresholds related to employment and census data in the bill, however, does the CHPA know if there is a map or database that taxpayers can use to easily view these data?**

There is not currently a database for this specific set of criteria on energy communities. However, such databases have been developed—for instance for the new markets tax credit.
DOMESTIC CONTENT

Is the domestic content percentage measured as percent of total cost? Or some other measure?

Total costs of the manufactured products of the facility (see Sec. 13101(g)(2) of the Inflation Reduction Act). Also, be sure to look at the adjusted percentages that apply under sec. 45Y and sec. 48E (secs. 13701 and 13702), because the percentage starts at 40% for projects beginning construction before January 1, 2024, but incrementally rise to 55% for projects starting construction after 2026.

“(iii) Manufactured product.—For purposes of clause (i), the manufactured products which are components of a qualified facility upon completion of construction shall be deemed to have been produced in the United States if not less than the adjusted percentage (as determined under subparagraph (C)) of the total costs of all such manufactured products of such facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.

Does the 10% ITC-related to domestic content apply to the cost of equipment only or to the whole project cost?

The additional credit applies to the same cost basis for eligible property determined to claim the underlying ITC. The bonus adds 10 percentage points (if the labor requirements are met) to the ITC—making a 30% credit increase to 40%.

DIRECT PAY

Can a federal agency take advantage of direct pay in this bill's context?

The Tennessee Valley Authority (TVA) is designated as an eligible entity for direct pay—other federal agencies are not. Federal corporations formed under an act of Congress are exempt from tax under sec. 501(c)(1), including Federal Credit Unions,[9] so they would likely be considered eligible.
**DIRECT PAY**

Regarding direct pay, if the tax-exempt entity doesn't transfer tax exemption to someone else, will they get a check from the Treasury?

Taxpayers may make an election for direct payments “at such time and in such manner as the Secretary [Treasury] may provide...” The Secretary is empowered to make regulations specifying the administrative procedures for determining and making direct pay claims under the Inflation Reduction Act. There are some timing requirements with respect to State entities being required to make their claims to the Treasury Department. This means the Treasury Department will need to establish administrative procedures and forms allowing the non-taxpayers to make these claims for direct payments.

What is the hospital/university direct pay scenario?

Organizations exempt from tax under subtitle A of the Internal Revenue Code are “applicable entities” for direct payments. If the hospital or university is exempt, they would be eligible for a direct payment. As discussed in the previous question, the Treasury Department will have to create some regulations and procedures allowing taxpayers to make direct pay claims.

Is direct pay available to a municipal utility, municipal landfill, or a municipality?

Yes. The following “applicable entities” are eligible for direct payments. Municipal organizations would be considered political subdivisions of states.

“(d) SPECIAL RULES.—For purposes of this section—

“(1) APPLICABLE ENTITY.—

“(A) IN GENERAL.—The term ‘applicable entity’ means—

“(i) any organization exempt from the tax imposed by subtitle A,
“(ii) any State or political subdivision thereof,
“(iii) the Tennessee Valley Authority,
“(iv) an Indian tribal government (as defined in section 30D(g)(9)),
“(v) any Alaska Native Corporation (as defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602(m)), or
“(vi) any corporation operating on a cooperative basis which is engaged in furnishing electric energy to persons in rural areas. (see p. 188).[10]
Are there specific forms or processes a tax-exempt entity will have to fill out / follow to take advantage of the Transferability option or the Direct Pay option for the CHP ITC?

Likely, yes. The IRS is frequently instructed in the bill to produce regulations and guidance. It will also have to issue new forms that take changes in law into account allowing taxpayers to access these provisions.

To start that process, the IRS issued Notice 2022-50[11] seeking comment on the implementation of the transferability and direct pay provisions, and is working on developing guidance on this subject for taxpayers, as well as administrative procedures. Once there is guidance for taxpayers on this subject, we expect the administrative forms, or amendments to existing forms, allowing taxpayers to make these elections will follow.

The elective direct payment and transferability mechanisms are separate and distinct. The IRA does not provide for allowing tax-exempt entities to transfer their direct payment eligibility to a taxpayer. What the IRA does allow is for business taxpayers to transfer specified clean energy tax credits to other business taxpayers (subject to special rules with respect to partnerships and S corporations). Although not required, we would expect there to be some transaction costs associated with the transfer of tax credits.

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**IRS GUIDANCE**

**Would offsets (refs and carbon) purchased with natural gas to zero out carbon count toward zero emissions?**

That is something the IRS (consulting with agencies like DOE and EPA) would have to determine but it seems unlikely, especially in this Administration. As discussed below in Hydrogen and Clean Fuels section, the EPA does have a role in determining net emissions for combustion facilities.

**Do we have any sense of how long it will take for IRS guidelines to be published?**

We believe the IRS will be issuing guidance on a piecemeal basis. The most recent IRS guidance was released on Nov. 29th – Notice 2022–61[12] explains prevailing wage and apprenticeship requirements for enhanced credits/deductions.
Can regulated utilities get the ITC?

Yes. They are often required to normalize these tax benefits, but the IRA does give them a few ways to get out of them such as allowing the PTC to be used for solar from the outset and allowing utilities to opt out of storage for the ITC.

Can utility interconnection costs / property including utility DTT's and substation upgrade costs charged to a project be ITC-eligible property for projects <5 MW?

The IRA makes “qualified interconnection property” that is “in connection” of Sec. 48 eligible energy property under 5 MW under the ITC. So, in general, if there is a necessary interconnection upgrade required for projects <5 MW, that is qualified property. The terms “interconnection agreement” and “utility” are also specifically defined with respect to this provision.

“(B) QUALIFIED INTERCONNECTION PROPERTY.—The term ‘qualified interconnection property’ means, with respect to an energy project which is not a microgrid controller, any tangible property—

“(i) which is part of an addition, modification, or upgrade to a transmission or distribution system which is required at or beyond the point at which the energy project interconnects to such transmission or distribution system in order to accommodate such interconnection,

“(ii) either—

“(I) which is constructed, reconstructed, or erected by the taxpayer, or

“(II) for which the cost with respect to the construction, reconstruction, or erection of such property is paid or incurred by such taxpayer, and

“(iii) the original use of which, pursuant to an interconnection agreement, commences with a utility.

Is there any guidance on the definition of a microgrid as far as the IRA and ITC credits?

The IRA added microgrid controllers as eligible property for the ITC. As part of that addition, the controller had to be part of a “qualified microgrid,” which is defined below.
Questions that Apply to Eligible Property Placed in Service 1/1/2025 or After.

What is zero emissions CHP?

To qualify for the zero emission tax credits under the technology neutral regime (sec. 45Y, sec. 48E), the facility must have a greenhouse gas emission rate (amount of greenhouse gas emissions in producing electricity in grams per KWh) of zero. In the case of fuel combustion and gasification processes, this means the net greenhouse gas emissions—taking into account the lifecycle greenhouse gas emissions under sec. 211(o)(1)(H) of the Clean Air Act,[15] which leaves the final calculations to the EPA Administrator.

The Secretary of Treasury is required to publish greenhouse gas emission rates for types or categories of facilities. If there is no emissions rate established for a certain kind of facility, taxpayers may petition the Secretary to establish a rate for the facility.

“(8) MICROGRID CONTROLLER.— “(A) IN GENERAL.—The term ‘microgrid controller’ means equipment which is— “(i) part of a qualified microgrid, and “(ii) designed and used to monitor and control the energy resources and loads on such microgrid.

“(B) QUALIFIED MICROGRID.—The term ‘qualified microgrid’ means an electrical system which— “(i) includes equipment which is capable of generating not less than 4 kilowatts and not greater than 20 megawatts of electricity, “(ii) is capable of operating— “(I) in connection with the electrical grid and as a single controllable entity with respect to such grid, and “(II) independently (and disconnected) from such grid, and “(iii) is not part of a bulk-power system (as defined in section 215 of the Federal Power Act (16 U.S.C. 824o)). (see PL 117-169, 136 STAT. 1916, p. 100).[13]

The microgrid is defined for the purposes of determining the eligibility of the microgrid controller property for the ITC, rather than the microgrid as a whole.

The Clean Energy for America Act,[14] which served as the basis for the technology neutral credits in the IRA, did have a provision providing an ITC for microgrids that was equal to the product of 30% and the relative avoided emissions rate of the microgrid. Those provisions on microgrids did not carry forward into the IRA.
Does pink H2 or other non-gray H2 qualify as clean?

The Inflation Reduction Act's overall objective for clean energy tax incentives is to transition as much as possible to a technology neutral, performance-based policy.

With respect to the production incentives for hydrogen, there is a performance-based scale, which provides greater incentives for cleaner hydrogen production methods and meeting the labor requirements as outlined in the table below. The type of fuel is only relevant in so far as it affects the ability to meet the lifecycle greenhouse gas emission standard.

<table>
<thead>
<tr>
<th>Lifecycle GHG Emissions Range</th>
<th>Base Amount*</th>
<th>Applicable Percentage</th>
<th>Base Credit per kg H2</th>
<th>Bonus Credit per kg H2</th>
<th>Base ITC Percentage</th>
<th>Bonus ITC Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 - 4 kg CO2e per kg Hydrogen</td>
<td>$0.6</td>
<td>20.0%</td>
<td>$0.12</td>
<td>$0.6</td>
<td>1.2%</td>
<td>6.0%</td>
</tr>
<tr>
<td>1.5 - 2.5 kg CO2e per kg Hydrogen</td>
<td>$0.6</td>
<td>25.0%</td>
<td>$0.15</td>
<td>$0.8</td>
<td>1.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td>0.45 - 1.5 kg CO2e per kg Hydrogen</td>
<td>$0.6</td>
<td>33.4%</td>
<td>$0.20</td>
<td>$1.0</td>
<td>2.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>less than 0.45 kg CO2e per kg Hydrogen</td>
<td>$0.6</td>
<td>100.0%</td>
<td>$0.60</td>
<td>$3.0</td>
<td>6.0%</td>
<td>30.0%</td>
</tr>
</tbody>
</table>

* Subject to inflation adjustment

Are both fossil and biogas CHP equal in getting the 30% near term? No extra kicker for renewable gas?

There is no extra incentive for renewable gas CHP. However, qualified biomass projects, depending on their characteristics, may be eligible for the PTC under Sec. 45 as well, so that is a potential other option (taxpayers cannot take both the ITC and PTC for the same facility). This may offer more generous incentives in terms of project size and credit applicability. There’s no other extra benefit for using renewable fuels in the near term, but renewable fuels are likely better positioned than fossil fuels to meet the zero-emission standard when the transition to the zero-emission regime takes place.

ADVANCED MANUFACTURING CREDIT

Is the Advanced Energy Manufacturing tax credit in addition to ITC?

The Advanced Manufacturing ITC (sec. 48C) is separate from the Sec. 48 ITC. Continued...
We believe the sec. 48C ITC can be potentially beneficial to CHP and WHP in other ways. First, the definition of qualifying property uses of the credit was modified to include “property designed to produce energy conservation technologies (including residential, commercial, and industrial applications).” (see p. 417-8). This could provide opportunities for U.S.-based manufacturing of CHP and WHP components.

In addition, this could provide additional opportunities for CHP as 48C can be used to retrofit industrial sites to reduce their greenhouse gas emissions by 20% through 1) low- or zero-carbon heat systems; 2) carbon capture, transport, storage, and utilization systems; 3) energy efficiency and reduction of waste from industrial processes; or any other industrial technology as determined by the Secretary of Treasury. However, the manufacturing facility may not double dip and claim the sec. 48 ITC and sec. 48C credit for the same CHP property.

**What is the time horizon for the 20% emissions reductions for advanced manufacturing tax credits?**

The IRA does not specify. However, since this is an ITC our expectation would be that the facility must reach the emissions reduction requirement before the tax credit can be claimed.

**OTHER QUESTIONS**

**Do trade agreements as per Buy American treaty/trade partners like Germany count as domestic content?**

There are parts of the sec. 661.7 of title 49 of the CFR,[16] which say the waiver provisions do not apply for goods that are determined to originate in foreign countries that are parties to free trade agreements (FTAs) with the U.S., which the foreign country is deemed to be honoring. Again, since these regulations were devised for the Federal Transit Administration it is hard to know how the Treasury Department will apply them in the context of a bonus tax credit for energy facilities.

The Office of the U.S. Trade Representative has a list of the countries and regions with which the U.S. has an FTA.[17] Germany is not among those nations but a Transatlantic Trade and Investment Partnership (T-TIP)[18] has been proposed to put the U.S. and EU into such a relationship. The German government is calling for the resumption of negotiations.[19]
The IRS guidance on the prevailing wage and apprenticeship provisions are available. [20]

Copies of those notices are available for energy credits [21] and hydrogen & CCS. [22]

The IRS requested information regarding the energy-related tax provisions in the IRA to inform their upcoming guidance. Those notices also provide useful, plain language summaries of many provisions.

In addition to investment tax credit (ITC) incentives under the Inflation Reduction Act (IRA), there are also funds for manufacturers and CHP under the IIJA. To qualify for funds you need a no-cost screening with your regional DOE CHP TAP.

Helpful summary of domestic content provisions of the IIJA from the Congressional Research Service. [21]

Individuals can contact your local CHP TAPs and we can engage with DOE HQ on your behalf. [20]

The IRS guidance on the prevailing wage and apprenticeship provisions are available. [24]