



IOWA: CHP AIR PERMITTING MADE TRANSPARENT

Policy Description

CHP projects require state air permits, which can vary in detail and requirements depending on the project's size, technology, fuel source, location, and associated infrastructure modifications. This variability is generally understood by businesses considering CHP installations. However, what the permitting process entails is often not well understood. Opaque and cumbersome state air permitting processes contribute to misunderstandings and can discourage the deployment of CHP technologies.

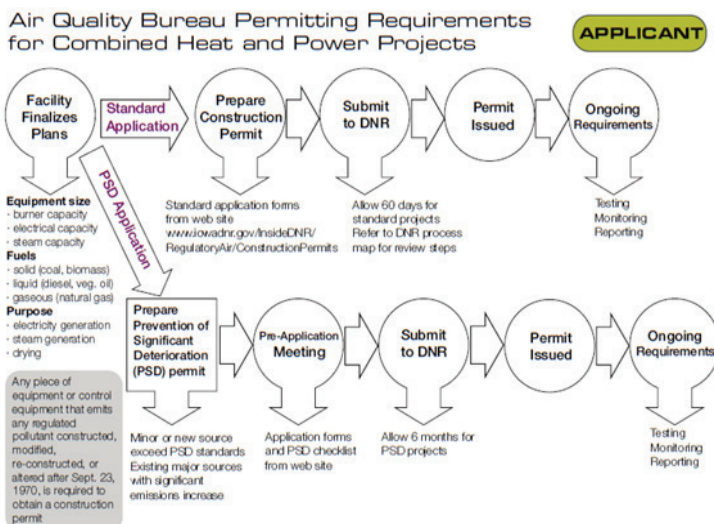
Iowa illuminated its air permitting process by creating a CHP-specific air permitting webpage and reduced the permitting burden by adopting streamlined and simplified permitting practices. Both actions can make a big difference to CHP project developers.

- Iowa's CHP air permitting webpage allows project developers to readily ascertain their compliance obligations, technology options, and related costs. The webpage provides the information CHP developers need to determine how long it will take to obtain an air permit and how their design choices can affect that timeframe.
- Iowa Department of Natural Resources (DNR) regulations include permit streamlining and exemptions that reduce regulatory burdens for certain CHP projects.

Quick Facts

Location: Iowa
Market Sector: All sectors
Program Type: Air permitting for CHP systems
Geography: Entire state
Program Start: 2013

Permitting Process Transparency



Iowa CHP Resource Guide,
 Iowa Economic Development Authority, 2013

Iowa DNR's Air Quality Construction Permitting Materials webpage includes a "Combined Heat and Power" tab that opens to a page with multiple useful resources, such as links to Frequently Asked Questions and specific forms and guidance for CHP projects. Useful questions answered in the FAQ page include:

- What are the applicable federal requirements?
- What are the applicable state regulations?
- Can I start construction before I obtain the permits?
- Is both the electric and gas output of CHP units considered in determining compliance with applicable air regulations?

Timeframe for Permit Issuance

The Iowa CHP webpage states that it can take 65 days or more for construction permit application processing but also explains some of the factors that can lead to

shorter or longer permit processing times. Standard natural-gas-fired CHP projects can generally be processed relatively quickly because they utilize well-known technologies (e.g., reciprocating engines, turbines, chillers, and condensers) and a well-known fuel. The emissions from those projects are predictable and typically can be easily permitted.

However, many factors, including the size of the project, its fuel source, and where it is located, can make a difference in permitting requirements and timing. The Iowa DNR's CHP webpage explains that an ambient air quality analysis may be required for projects that are projected to emit a larger quantity of emissions or for projects located in areas with higher



A 1.4 MW engine installed in 2015 at the Des Moines Wastewater Treatment Plant followed streamlined air permitting procedures.

levels of existing air pollution. In those cases, dispersion air modeling may be required. To assist in determining whether the projected emissions from the system will require dispersion modeling, the CHP webpage directs CHP project developers to its online construction permitting Form MD (Non-PSD Modeling for Determination Form).¹ This form, which must be submitted with air permit applications, is also a tool that allows permit applicants to determine independently whether dispersion modeling will be needed.

Most areas in Iowa have good air quality, and locating a CHP project in those areas simplifies the permitting process. Iowa DNR provides pre-approved “default” background ambient air quality concentrations that can be used in the Form MD calculations to determine whether locating a CHP project in a particular area could trigger dispersion modeling and a longer permitting process.² (Applicants may also propose site-specific representative background concentrations, and guidance for doing so is provided online.)³ This combination of online tools and information makes the permitting parameters

transparent to permit applicants at the outset of the permitting process. CHP project developers are informed that locating the system in clean areas of the state or using certain fuels (such as natural gas) that do not emit pollutants of concern could result in fewer permit conditions and faster permit issuance.

Permit Streamlining and Exemptions

No Separate Operating Permit Requirement

Unlike some states, Iowa DNR regulations do not require that a separate air pollution operating permit be obtained unless a CHP project qualifies as a Clean Air Act “major source” based on its “potential to emit” regulated air pollutants. For non-major sources, all requirements are included in the construction permit. This can eliminate additional delays in start-up and uncertainty related to operating requirements. For a “major source” that is installing or modifying a CHP system, any new emissions and operating requirements associated with the CHP unit will be incorporated into the plantwide Title V operating permit.

Construction Permit Exemptions

Iowa DNR also provides exemptions from construction permit requirements for certain types and/or sizes of emission sources.⁴ While there are no exemptions that are generally applicable to CHP emissions sources, Iowa DNR’s CHP FAQ webpage points to a number of exemptions that are potentially available for CHP units under 567 Iowa Administrative Code 22.1(2). To qualify for some of these exemptions, CHP project developers must provide notification to Iowa DNR and keep certain records but are not required to complete the full permitting process.

Resources:

- **Iowa DNR CHP Permitting Webpage:**
<https://www.iowadnr.gov/Environmental-Protection/Air-Quality/Construction-Permits/Construction-Permitting-Materials#258896-combined-heat-and-power-chp>
- **Iowa DNR, CHP FAQ:**
https://www.iowadnr.gov/Portals/idnr/uploads/air/conpermit/cp_chp_faq.pdf
 - **Iowa DNR Toll Free Hotline:**
1.877.AIR.IOWA (1.877.247.4692)
- **Iowa Economic Development Authority:**
<https://www.iowaeda.com/>

For More Information

U.S. DOE CENTRAL CHP TECHNICAL ASSISTANCE PARTNERSHIP (CHP TAP)

www.cchptap.org

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<http://www.iowadnr.gov/airconstructionpermits>

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¹ <https://www.iowadnr.gov/Portals/idnr/uploads/forms/5420948.pdf>

² <https://www.iowadnr.gov/Environmental-Protection/Air-Quality/Modeling/Dispersion-Modeling/Background-Data>

³ *Id.*

⁴ <https://www.iowadnr.gov/Environmental-Protection/Air-Quality/Construction-Permits/Exemptions>