

# Geothermal Continuation Application & Technical Guidelines

Use this guide to help with completing applications for intermediate and continued (indefinite) continuation of geothermal leases in the Electronic Transfer System (ETS) under Geothermal Continuation.

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## General Information

Use the Geothermal Continuation Application in ETS to apply for continuation under section 5 of the Geothermal Resource Tenure Regulation (The Regulation) for an initial term expiry or under section 6 for an intermediate term expiry.

A final decision for a geothermal lease cannot be granted until after the lease expiry date.

Lands and rights that are not included in an application will be terminated.

You should not assume that a geothermal continuation has been granted until you receive confirmation from Alberta Energy and Minerals (the department).

The geothermal application node in ETS can also be used to apply for extensions of the term of the lease under Section 8(1)(h) of the *Mines and Minerals Act* (The Act).

You may also use this application to apply to extend the time to complete a specific action under Section 8(1)(g) of the Act.

To request a review of a continuation decision, you must submit your response with supporting documents. If applied for, extension document(s) explaining the reason for an extension under section 8(1)(h) or 8(1)(g) must accompany the application.

If new information is submitted, it must relate to operations conducted before expiry of the agreement.

**Note:** Electronic submission of data must be submitted with your application in ETS. If the data is confidential to the applicant and/or being sent under separate cover, it must be emailed to: [EM.DataSubmissionPNGContinuation@gov.ab.ca](mailto:EM.DataSubmissionPNGContinuation@gov.ab.ca)

Section numbers in the application and this guide refer to the Geothermal Resource Tenure Regulation, unless otherwise specified.

## Resources

See the [Geothermal Resource Development](#) and the [Tenure](#) sections on [Alberta.ca](https://alberta.ca) for regulations, Information Bulletin 2023-02 and other information.

For additional information regarding Geothermal processes, refer to [Alberta Online Learning-Geothermal](#).

Questions regarding the regulation, legislation, or ETS-Geothermal Continuation, may be emailed to [energy.geothermaltenure@gov.ab.ca](mailto:energy.geothermaltenure@gov.ab.ca).

## Designated Representative

The designated representative appointed by a company under section 2 of the Mines and Minerals

Administration Regulation is delegated the responsibility for all communication with Alberta Energy and Minerals and is the person with whom Alberta Energy and Minerals will correspond with.

It is important that all lessees understand that they will be bound by the decisions and actions of the designated representative that they appoint.

## Continuation Application Information

An application for continuation must be submitted to the department through ETS within one year before the expiry date of the lease. **Do not mail, fax, e-mail or drop off your application.**

**Ensure you are authorized to submit the application.**

Your company must be the designated representative or obtain authorization from the designated representative for each lease applied for prior to submission. **Only one application per lease expiry is considered by the department; however, an application may include multiple leases.**

When applying for continuation, you can add multiple leases under the Agreement section. All lands associated to the agreement(s) and agreement expiry will then be available for selecting under the Continuation Type section of the application.

You may use one application for multiple agreements **provided that:**

- There is only one application for each agreement expiry,
- You are authorized to apply for all agreements (if applicable), and
- The agreements are located near each other and are covered by the same technical data.
- All agreements are in the same term, i.e., initial, intermediate, or continued.

**Note:** Once you submit the application, all agreements within the single application are assigned their own ETS Request number for easy tracking during the continuation process.

- All agreements will share an Application Reference number. Each ETS Request or agreement in the original submission that shares

the Application Reference ID are reviewed or processed together.

- Agreements from one application are reviewed together. However, one may be finalized, and the remaining agreements sent a notice. Also, as the applicant, you may wish to withdraw an agreement but not all the agreements within the application.
- Once your application has been submitted to Alberta Energy and Minerals, you should go into each ETS Request or agreement and print the Geothermal Continuation Document as this document has the Submission Date for your records.

When determining productivity, Alberta Energy and Minerals only considers technical data that is geographically located within Alberta, publicly available, or data that is supplied by the applicant.

**Alberta Energy Regulator (AER) confidential data is not available to Alberta Energy and Minerals.**

Rental payment is not required at the time of application. The department provides notification of rental owing after the intermediate or continued term decision is finalized.

## Status of the Application

Once Alberta Energy and Minerals receives your application, your intermediate or continued term application will have a status of "Continuation Pending = Yes" on the Agreement Detail Report until Alberta Energy and Minerals finalizes the decision.

Lands and/or rights not applied for will revert to the Crown after the application is finalized.

Do not assume the intermediate or continued term is granted until you receive confirmation from Alberta Energy and Minerals.

## Technical Information

The technical information required is a guide to assist industry with their application. It is the applicant's responsibility to make their case with a high degree of confidence that a geothermal lease is productive.

**ALL DATA IS HELD CONFIDENTIAL.** Alberta Energy and Minerals does not allow data supplied

by applicants, to be used on a different application, even if the information directly relates to another agreement, without authorization.

You may authorize Alberta Energy and Minerals to refer to data previously submitted by your company in the past 12 months in support of another application. The authorization and data must be emailed to:

[EM.DataSubmissionPNGContinuation@gov.ab.ca](mailto:EM.DataSubmissionPNGContinuation@gov.ab.ca).

Specify the data you want reviewed, the date it was submitted, and the agreement number(s) to which it is related.

Prior to the submission of an application, a company is welcome to present data in person at Alberta Energy and Minerals Edmonton office. Contact [Energy.GeothermalTenure@gov.ab.ca](mailto:Energy.GeothermalTenure@gov.ab.ca) to book a meeting. Please have the following information ready:

- Preferred date/time (if possible, have an alternative in case your preferred date or time is not available)
- Attendee list
- Geothermal lease number(s)
- Zone being applied for
- Description of technical data being presented
- Approximate length of time required for meeting
- If audio-visual equipment is needed

All data relevant to your application should be included. Within the last year before expiry of the five-year initial term, an application to request an intermediate term must include a geothermal assessment report. Additional information should include evidence of onsite physical work undertaken to demonstrate the geothermal resource and technical viability of producing geothermal energy. Examples of activities occurring during the initial term of the geothermal lease that would be considered, include:

- drilling a well(s).
- re-completing or deepening of existing well(s).
- testing wells.
- logging wells.
- surface infrastructure (e.g. pipelines, tanks; equipment supporting the extraction of heat or generation of power), or
- fluid sampling and bottom hole temperatures.

Within the last year of the five-year intermediate term; or with the department's consent, any time

before the last year of the intermediate term, an application to request an indefinite continuation must include a discussion of the geothermal project and technical data evidence, including:

- geothermal recovery technology.
- the unique well identifier(s) of well(s) drilled or re-entered for geothermal purposes and the status/operation role.
- fluid and associated temperatures.
- fluid disposal.
- technical test and/or surveys undertaken; and
- record of heat and/or energy generation in the service of district heating and electricity generation and transmission (local or grid).

**Note**, data submitted to the AER is not available to Alberta Energy and Minerals, with the exception of wells, production data and test data that are non-confidential and that have been entered on the AER system. Data that has been released from confidential status for less than three months, and data that has only recently been submitted (e.g. recent test or production data), may also be unavailable.

Following Alberta Energy and Minerals initial review of your application, more information or clarity may be requested. Failure to submit additional data as requested may affect the success of your application.

All zones being applied for must be listed.

To avoid ambiguity, all wells should be referred to by the unique well identifier.

## Continuation of a Geothermal Lease

If Alberta Energy and Minerals approves the intermediate or indefinite continuation (continued term) application, a final decision letter and an Amended Appendix, (if applicable) is sent electronically to the designated representative and to the applicant (if applicable) through ETS-Geothermal Continuation.

Initial term lease expiries are continued or deleted in their entirety. Intermediate term lease expiries may be subject to amendments and severance of deeper rights.

Lands and/or rights that are not continued are deleted and revert to the Crown.

## Notice and Request for Review

A notice pursuant to section 6 is sent to the applicant in cases where Alberta Energy and Minerals disagrees with the application and is not prepared to continue some or all of the lands or rights. The applicant may submit additional information before the agreement expires. After an agreement expires and the applicant disagrees with the department's decision notice, the applicant may request a review and submit additional information within the timeline outlined in the department's decision notice.

If the application does not support the intermediate or continued term requested, the applicant will receive a decision notice electronically through ETS-Geothermal Continuation. The ETS Request status will be at Notice. You can then respond to the notice.

Alberta Energy and Minerals will finalize the agreement based on the terms outlined in the notice letter unless:

- The applicant submits additional data prior to the agreement expiry or
- Submits a request for review before the Notice Expiry date.

Only the company who submitted the application can request a review of Alberta Energy and Minerals' decision notice.

A Request for Review can only be made on zones or lands that were originally applied for.

Following a request for review, Alberta Energy and Minerals will finalize the agreement.

If new information is submitted, it must relate to operations conducted before expiry of the agreement.

Data obtained from a well that was deemed confidential by the AER at the time the agreement expired is not eligible to be included in the review.

Information submitted that relates to operations conducted after agreement expiry is ineligible and may constitute a potential trespass.

## Notice of Non-Productivity

A notice issued pursuant to section 7 advises the lessee that a spacing unit of an agreement continuing under section 6 is no longer considered productive. The section 7 notice is for one year, at the end of which the lessee may apply for further continuation under section 6 or for an extension pursuant to section 8(1)(h) of the *Mines and Minerals Act*.

An agreement may be eligible for an extension pursuant to section 8(1)(h) of the *Mines and Minerals Act* if one or more of the following conditions are met:

- operations have been conducted on the agreement to prove it productive during the one-year notice period.
- there are drilling restrictions on the agreement such as winter drilling or environmental constraints.
- there are other extenuating circumstances.

An application for continuation must be made prior to the expiry of the notice period. If no application is received by the department, or the geothermal lease is determined to be non-productive, the lease will be amended or cancelled accordingly.

**Note:** the lessee may have information that Alberta Energy and Minerals is not privy to such as flow tests, or new production, and may be able to satisfy the notice by including this technical data in the application.

## Application Sections in ETS Administrative Information Section

**Company:** Select the name of the company applying for continuation.

**Creator:** The creator account id will auto populate.

**Comments:** You can add a comment for your reference. This is optional and will not be seen by Alberta Energy and Minerals.

## Contact Information Section

**Company Contacts:** Enter applicant contact information.

**Add Technical Contacts:** Provide the name, title, phone number and email address for at least one technical contact. This is not required but strongly suggested.

## Geological Information Section

Attach and upload the related data with your application.

If data is being sent via email, by another company in support of your application, it must be sent to [EM.DataSubmissionPNGContinuation@gov.ab.ca](mailto:EM.DataSubmissionPNGContinuation@gov.ab.ca).

An authorization letter must also be included with the Geothermal Lease Number, ETS Request Number, Company Name, and application submission date.

**Attach a Geological Discussion and Geothermal Assessment Report:** Click on Choose Files to select a document to attach to your application. Once selected you must then click the Upload button. Ensure your application is saved before uploading a document.

A geological discussion summarizes work done, results and conclusions. It must be submitted with the application form, even when technical data is sent separately.

Geological discussions attached to intermediate or continued term Applications in ETS are to include text only. They should not include any technical data.

Save your request. ETS will assign an ETS Request number for the application. You can proceed with filling in your application. **Note**, your application has NOT been submitted at this stage.

## Agreements Section

**Agreement Number:** Click the Add Agreement button, a Search Agreement screen will display. Enter the Geothermal Agreement number(s) separated with a comma (e.g., 6023010001) and select Search. All agreements found will display. You must check each agreement you wish to add to the application. The Expiry Date and Vintage will auto populate based on your selection.

Once an agreement and expiry date are selected/added to the Agreement Section in ETS, all associated lands display in the screen.

**Note:** An application for an Initial Term expiry into its Intermediate Term must be for the entire agreement. If you do not want all the lands within the lease, they must be surrendered prior to the Geothermal Continuation submission.

Deeper rights reversion may apply to a Continued Term application submission.

### Example:

Geothermal agreement comprises of section 2 and section 3 but only section 3 is being applied for. User will need to customize the lands in the Production zone section and select only section 3.

## Continuation Type Section

Select the continuation type(s) you are applying for (Extension; Intermediate Term; Continued Term). Based on your selections new heading/sections will display in the application screen.

### Extension

#### Summary

An agreement for which a notice pursuant to Section 7 of the Geothermal Resource Tenure Regulation has been issued, or at expiry of an initial or intermediate term, may be eligible for an extension pursuant to Section 8(1)(h) of the *Act* if one or more of the following:

- there are drilling restrictions on the agreement such as winter drilling or environmental constraints that have prevented or delayed operations beyond your control.
- there are other extenuating circumstances.

#### Guidelines

If a company encounters significant delays which may have impacted their ability to continue their lease at any stage of its lifespan, additional time may be applied for under section 8(1)(h) of the *Act*.

When applying for this type of extension through ETS, applicants must include all appropriate



information such as:

- The reason for the request.
- The length of time needed for the extension.
- The operations performed during the previous time period.
- The timeline of contributing events.
- An explanation of why the applicant could not prove the lease proven or potentially productive during the lease term.
- An explanation of why the delays were beyond the applicant's control; and
- Any other pertinent information that would be beneficial.

The applicant should also include supporting documentation which may be in the form of pictures, weather office reports, dated documentation, copies of letters or e-mails, etc. If the reason for the delay was an unforeseen or non-routine government requirement, then the best practice is to attach written evidence from the other government department or agency.

**Requesting an extension:** An extension may be applied for if additional time is required beyond the expiry date of an agreement to continue operations.

- Select Add Extension, in the Add Extension window select the agreement and type of extension being applied for. The Expiry Date and all corresponding land applied in the Agreement section will be displayed. Indicate the Requested Expiry Date you wish the agreement to be extended until. Click on Add and the agreement will populate under the Extension section of the application.
- Add extension documents for the requested extensions by selecting the Choose Files button, select your file(s), then click on the upload button.
- An extension of term may be applied for under Section 8(1)(h) of the *Act*.
- You may also apply to extend the time to complete a specific action under Section 8(1)(g) of the *Act*.
- The circumstances for extensions are generally considered at the time of expiry; therefore, it is recommended to apply for a Section 8(1)(h) extension closer to the agreement expiry.
- There is no guarantee that an application under this section will result in an extension being granted.

- When a Section 8(1)(h) extension is granted, the agreement status is the same as it was under the former expiry date (e.g., an agreement that was under an Intermediate Term at the time the extension was granted, remains under an Intermediate Term throughout the extended period).

**Section 8(1)(g):** An agreement may be eligible under a Section 8(1)(g) to extend the time to complete a specific action. It must be applied for with another Continuation Type under the Geothermal Resource Tenure Regulation.

**To qualify for an extension under the *Mines and Minerals Act* the company must demonstrate the following:**

- Circumstances were unforeseeable, non-economic and beyond the company's control (i.e., not related to business decisions such as a late farm-in)
- The company or operator has demonstrated a diligent effort, where feasible, to address the circumstances.

If additional extension data is being sent via email to [EM.DatasubmissionPNGContinuation@gov.ab.ca](mailto:EM.DatasubmissionPNGContinuation@gov.ab.ca) please reference the Geothermal Agreement Number on all data or correspondence. This data must be received within 5 business days of the application submission.

Alberta Energy and Minerals may request additional information upon reviewing your application.

## Intermediate Term Expiry

### Summary

For a Geothermal Lease to enter into an intermediate term of five-years, the applicant must prove the lease is potentially productivity.

### Guidelines

The application must include a discussion of the geothermal project and technical data evidence, including:

- All potential or productive zones must be listed,
- Lands and rights requested for continuation,
- Geothermal recovery technology,
- The unique well identifier(s) of well(s) drilled or re-entered for geothermal purposes and the status/operation role,
- Fluid and associated temperatures,

- Fluid disposal,
- Technical test and/or surveys undertaken, and
- Record of heat and/or energy generation in the service of district heating and electricity generation and transmission (local or grid),
- AER applications and approvals.

The expectation when granting an intermediate term, is evidence of on-site physical work undertaken to demonstrate the geothermal resource and technical viability of producing geothermal energy.

Consequently, activities not considered for intermediate terms are, but not limited to; desktop studies, re-interpretation of public geoscience of technical studies or meetings that have occurred.

Examples of activities occurring during an initial term for a geothermal lease that would be considered include:

- Drilling a well(s),
- Re-completing or deepening of existing well(s),
- Testing wells,
- Logging wells,
- Surface infrastructure (e.g., pipelines, tanks, equipment supporting the extraction of heat or generation of power), or
- Fluid sampling and bottom hole temperatures.

For an Initial Term expiry to an Intermediate Term application to be successful, the agreement must be determined to be potentially productive.

- Select Add Production Zone, the Add Intermediate Term Expiry window will display. Select the zone and indicate the data being provided for that zone. Select Add for zone information to display in the Intermediate Term Expiry section of the application.

**Note**, to navigate for the zone selection, either use the scroll bar or click inside the Zone box and enter the first letter of the zone you are searching for. This will take you to the first zone starting with that letter. From here you may need to use the scrollbar if necessary.

ALL productive zones must be listed. Failure to identify zones in your application may affect the success of your application.

If an agreement in your application is zone-specific (e.g., an agreement with rights “excepting” geothermal resources in one or more zones), include a correlation between the wells in the agreement and the well quoted in the Zone Designation.

## Continued Term Expiry

### Summary

For a Geothermal Lease to enter into a continued term of five-years, the applicant must prove productivity. At the end of the five-year intermediate term, the lessee(s) must demonstrate to Alberta Energy and Minerals satisfaction that the geothermal lease is productive (i.e., generating energy derived from the leased geothermal resources).

### Guidelines

The application must be received prior to the Geothermal Lease expiry date to be eligible for a continued term. The continuation application also must include a discussion of the geothermal project and technical data evidence, including:

- geothermal recovery technology,
- the unique well identifier(s) of well(s) drilled or re-entered for geothermal purposes and the status/operation role,
- fluid and associated temperatures,
- fluid disposal,
- technical test and/or surveys undertaken, and
- record of heat and/or energy generation in the service of district heating and electricity generation and transmission (local or grid).

If Alberta Energy and Minerals considers the geothermal lease to be productive, the geothermal lease would move to an indefinite continued term.

For a Continued Term Expiry application to be successful, the lease must be determined to be productive.

- You may wish to apply for all expiring lands or for a portion. If only applying for a portion, the land must be customized by removing the checkmark from the land you do not want to apply for.
- Select Add Production Zone, the Add Intermediate Term Expiry window will display. Select the zone and indicate the data being

provided for that zone. Select Add for zone information to display in the Intermediate Term Expiry section of the application.

**Note**, to navigate for the zone selection, either use the scroll bar or click inside the Zone box and enter the first letter of the zone you are searching for. This will take you to the first zone starting with that letter. From here you may need to use the scrollbar if necessary.

ALL productive zones must be listed. Failure to identify zones in your application may affect the success of your application.

If an agreement in your application is zone-specific (e.g., an agreement with rights “excepting” geothermal resources in one or more zones), include a correlation between the wells in the agreement and the well quoted in the Zone Designation.

## Submit an Application

To submit an application, select the Submit button at the bottom of the ETS screen. Your application will be verified and if there are no deficiencies it will be submitted to Alberta Energy and Minerals.

For any deficiencies in your application, an error or warning message will be displayed at the top left corner of the application. An email notification is also sent. Any errors must be corrected before you will be permitted to submit your application. Although warnings do not prevent your application from being submitted, they are designed to identify areas where you may wish to incorporate additional information to your application.

If the applicant and designated representative are different, authorization is required prior to application submission.

The ETS Request status will change to Processing once the application has been successfully received by Alberta Energy and Minerals.

**Refer to the Authorization Guide:** go to the [Tenure](#) section on Alberta.ca for guides, regulations and other information, or visit the Authorization training module under the [Geothermal Resource](#) section in online learning for ETS screen captures.

## Client Withdrawn

If something is missed in the original agreement application, and it is prior to expiry, you must withdraw the application and resubmit. To do this click the **Withdraw** button. Once completed the ETS status will become **Client Withdrawn**.

### Note:

- Withdrawing an application will remove it from Alberta Energy and Minerals' records. Any notices made by Alberta Energy and Minerals on the agreement are also rescinded at the same time.
- When submitting a new application for the agreement, you must apply for all lands and/or zones that you want to apply for.

## Notes on Technical Data

All submitted data is retained by Alberta Energy and Minerals.

**ALL DATA IS HELD CONFIDENTIAL.** Your data is not made available to any other party.

You may present data in person to Alberta Energy and Minerals at the Edmonton office by contacting the Geothermal Continuation area to book a meeting. Your application and data must be submitted through ETS prior to expiry. Please have the following information ready:

- Preferred date/time (if possible, an alternative in case your preferred date/time is not available)
- Attendee list
- Geothermal lease number(s)
- Zone being applied for
- Description of technical data being presented
- Approximate length of time required for meeting
- If audio-visual equipment is needed

All relevant data should be included with your application. **Note:** data submitted to the AER is not available to Alberta Energy and Minerals, except for well information, production data and test data that is non-confidential. Data that has been released from confidential status for less than three months, and data that has only recently been submitted to the AER (e.g. recent test or production data), may not be available.

Following Alberta Energy and Minerals initial review of your application, you may be advised of any deficiencies. Failure to respond in a prompt manner may affect the result of your application.



### ALL producing, productive and potentially productive zones must be listed.

Copies of well logs and cross-sections should include a large enough interval to correlate the zones (e.g., completed interval plus regional markers above and below).

The term "Zone" relates to a stratum or series of strata considered by the Minister to be a zone for the purposes of this Regulation. If you are mapping several formations (e.g., Keg River, Leduc, Rundle, and Mannville), list the data supplied for each formation in a separate zone in your application.

### Once Application is submitted

ETS Requests and applications are electronically time stamped with a submission date. This date allows us to determine if the application is received on time.

If a client indicates on their submission that technical data is being emailed by another company in support of their application, we wait five business days before processing the application. As Geothermal Continuation has established response times, if the supporting data is not received within five business days, the application is reviewed without it.

### Response Times

Once your application has been successfully submitted, please allow:

- Two months for processing Intermediate Term Expiry and Continued Term Expiry applications.
- One month for processing Extension(s) applications.

**Note:** At the discretion of Alberta Energy and Minerals, response times may be extended.

### Notification Emails for Geothermal Clients

ETS sends Geothermal Continuation notification emails to the ETS application contact as a courtesy to notify your company that documents are available for review and/or action. Ensure contact information is current so all notification emails are sent to the appropriate person. The email includes information on where to locate the ETS Request (e.g., Work in Progress, Authorization or Request Status).

**Note:** Email notifications should not be relied on to track Geothermal Continuation Applications in ETS.

Best practise is for clients to monitor their requests on a regular basis. Users can search the status of a request any time in the Work in Progress screen by ETS Request number or lease number. Requests can also be searched and sorted by the status of the request to find time sensitive business, i.e., request status of Notice.

### No Applications

In those instances where no application for continuation is made, Alberta Energy and Minerals will send a final cancellation letter.

An email will be sent from ETS informing your company's site administrator that the final document can be retrieved under Request Status.

### Definitions

#### Geothermal Assessment Report

Administrative and technical documents, writings, materials, and data in the form and containing information required by the Minister in the assessment of a Geothermal Leasing application.

This report must detail efforts undertaken during the initial term of the lease to establish that the geothermal project is under active development.

#### Location

Defined in section 1(d) of the Geothermal Resource Tenure Regulation:

- (i) the subsurface underlying the surface area described in the lease as its location, or
- (ii) where the lease grants rights to geothermal resources in some but not all of the subsurface, the subsurface area or areas underlying the surface area described in the lease as its location and in respect of which the rights are granted.

#### Regulator

Alberta Energy Regulator (AER).

#### Zone Designation (ZD) See "Zone".

#### Zone

Identified by the generally accepted stratigraphic nomenclature as found in the Alberta Table of Formations.

## Inquires

For additional information on Geothermal Leasing in Alberta, please refer to [Information Bulletin 2023-02](#) which can be found on Alberta Energy and Minerals website.

If you have any questions that have not been answered by this Guide, please contact our help desk via email at [Energy.GeothermalTenure@gov.ab.ca](mailto:Energy.GeothermalTenure@gov.ab.ca)