



# ***Tax Relief for Pollution Control Property: How to Complete an Application and Address Common Issues***

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Texas Commission on Environmental Quality's  
Tax Relief for Pollution Control Property Program

November 16, 2015



# Agenda

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- Program Description and History
- Completing an Application
- Common Deficiency Issues
- Appeal Process
- Program Documents
- Program Contacts
- Questions



# Tax Relief for Pollution Control Property Program

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- Provides tax relief in the form of reduced ad valorem (property) taxation
  - Property owners
  - Property used either wholly or partly to control pollution
  - Meet or exceed an adopted federal, state, or local environmental law, rule, or regulation
  - Appraisal district determines appraised value of the pollution control property





# Program History

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- 1993
  - Ballot initiative Proposition 2
    - Amended the Texas Constitution
    - Authorized the legislature to create a program that allowed for equipment used for pollution control, prevention, and monitoring to be exempt from property taxes
  - 73rd Legislature created the Tax Relief Program





# Program History

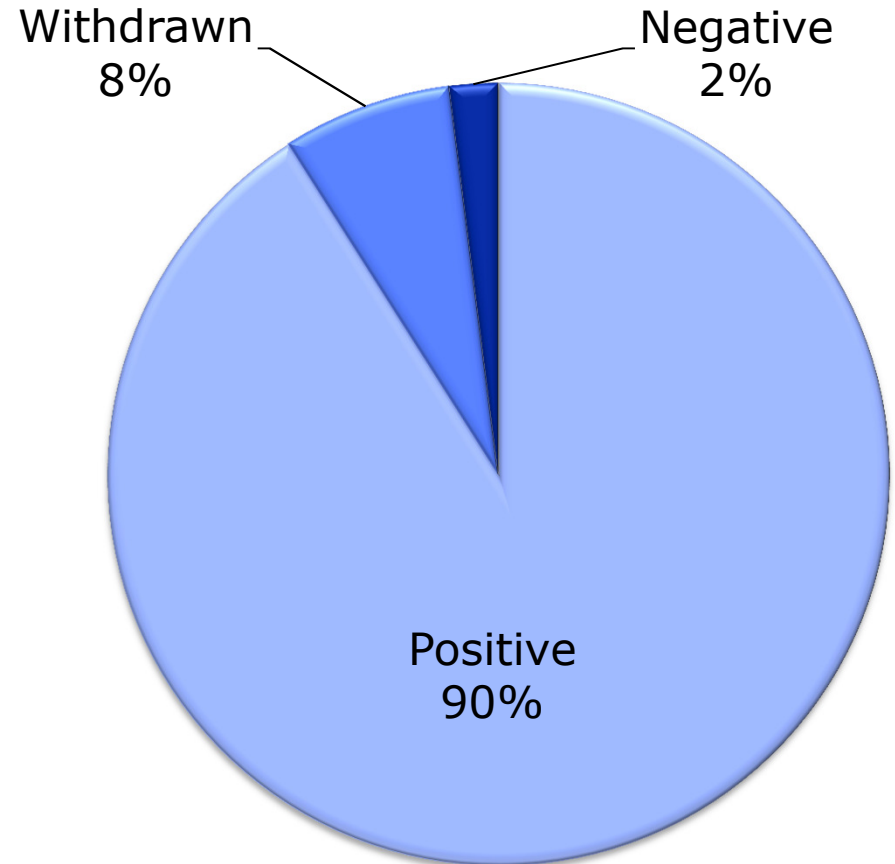
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- Subsequent Legislatures
  - Created a formal appeal process (2001)
  - Required adoption of standards for evaluating applications (2001)
  - Established an advisory committee (2009)
  - Required final determination, including response to an initial appeal, not later than one year after application is declared administratively complete (2013)



# Program History – Statistics

- As of September 30, 2015, 19,157 applications have been received
  - Average annual number of applications: 858
  - Total estimated property value: approximately \$40 billion
  - Average estimated property cost: \$2.1 million
  - Estimated property cost range: \$178 to \$506 million
  - 2014 average technical review time: 6 days, with 98% of reviews completed in 60 or fewer days



Use Determinations



# Eligible Property

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- Property must
  - have been installed, acquired, or constructed in order to meet or exceed an adopted federal, state, or local environmental law or rule;
  - be used for the prevention, monitoring, control, or reduction of air, water, or land pollution; and
  - have been constructed, acquired, or installed after January 1, 1994.
- This includes land that is used as pollution control property or used solely to house pollution control property.





# Ineligible Property

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- Property is not eligible
  - if it is used, constructed, acquired, or installed wholly to produce a good or provide a service;
  - if it is not wholly or partly used, constructed, acquired, or installed to meet or exceed an adopted environmental law or rule;
  - if it is used for residential purpose, or for recreational, park, or scenic use as defined by Texas Tax Code, §23.81;





# Ineligible Property, cont.

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- Property is not eligible (cont.)
  - if it is a motor vehicle (except vehicles dedicated 100% for pollution control);
  - if the property is subject to a tax abatement agreement executed before January 1, 1994; or
  - if the environmental benefit is derived from the use or characteristics of the good produced or service provided.



# Application Types

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- Tier I
  - Property listed in the Tier I Table located in 30 Texas Administrative Code §17.14(a) and used as described in the table
  - No marketable product arises from using the property
  - \$150 Fee
- Tier II
  - Property not listed in the Tier I Table but used 100% for pollution control
  - May include property on the (k) list (Texas Tax Code §11.31(k)) only if the property is used 100% for pollution control
  - \$1,000 Fee
- Tier III
  - Property used partially for pollution control
  - May include property on the (k) list that is used partially for pollution control
  - \$2,500 Fee



# Application Types

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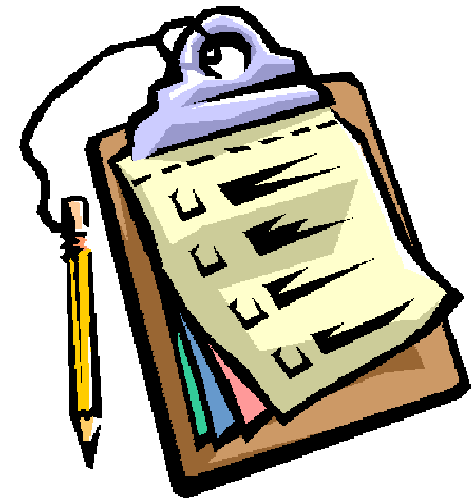
- Tier I Table
  - List of property determined to be used wholly for pollution control purposes
  - Property must be used as described on the list
  - A partial determination may be required if the property produces a marketable product (Tier III)
- Expedited Review List (ERL)
  - 18 categories of equipment listed in §11.31(k) and adopted in 30 TAC §17.17(B)



# Application Process Overview

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- Application and fee submitted
- Administrative and technical reviews conducted by TCEQ program staff
  - Deficiency letters issued as needed
- Use Determination issued
- Applicant files exemption request with appropriate appraisal district
- Local appraisal district (not TCEQ) determines the value of equipment associated with a Positive Use Determination





# Completing an Application

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- Determine if an application should be filed.
  - Have you installed pollution control property?
    - Does it control, prevent, or monitor land, water, or air pollution?
    - Was the pollutant generated at the facility?
    - Was the property installed to meet or exceed an applicable environmental regulation?



# Application Process: Responsibilities

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- Applicant
  - Prepare and submit a complete application accompanied by the appropriate fee
  - Respond timely, completely, and accurately to requests for additional information
  - Accept the TCEQ determination or file a timely appeal
  - File exemption request with appropriate County Appraisal District



# Application Process: Responsibilities

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- TCEQ Staff
  - Conduct full administrative and technical reviews
  - Prepare appropriate letters and documentation
  - Issue appropriate determinations
- Chief Appraiser
  - Accept the TCEQ determination or file a timely appeal
  - Determine appraised value of pollution control equipment for which a positive use determination has been given
  - Issue the property tax exemption

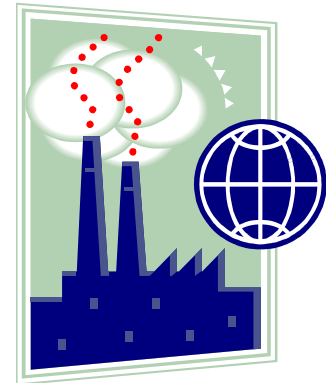


# Completing an Application

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## Section 1. Property Owner Information

1. Company Name of Owner
2. Mailing Address
3. City, State, Zip
4. Customer Number (CN)
5. Regulated Entity Number (RN)
6. Is this property owned by the CN listed in Question 4? If the answer is 'No,' please explain.
7. Is this property subject to any lease or lease-to-own agreement? If the answer is 'Yes,' please explain
8. Is this property operated by the RN listed in Question 5? If the answer is 'No,' please explain.



Note: To be eligible for a positive use determination, the property must be owned and operated by the same entity.





# Completing an Application

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## Section 2. Physical Location of Property

1. Name of Facility or Unit where the property is physically located
2. Type of Mfg. Process or Service
3. Street Address
4. City, State, Zip
5. County
6. Appraisal District Account Number(s)



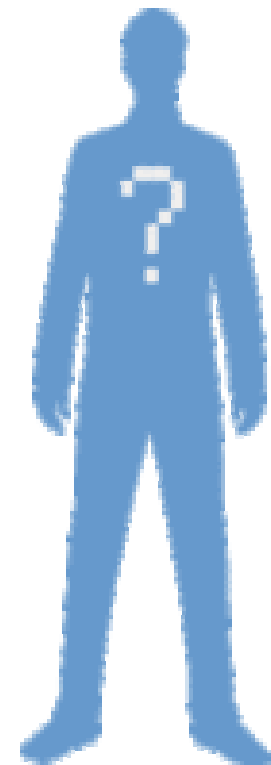


# Completing an Application

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## Section 3. Contact Name

1. Company Name
2. First Name of Contact
3. Middle Initial
4. Last Name of Contact
5. Salutation:  Mr.  Mrs.  Ms.  Dr.  Other
6. Title
7. Suffix
8. Mailing Address
9. City, State, Zip
10. Phone Number/Fax Number
11. Email Address
12. Self-Assigned Tracking Number (optional)





# Completing an Application

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## Section 4. General Information

1. What is the type of ownership of this facility?

- Corporation       Sole Proprietor     Partnership
- Limited Partner     Limited Liability Corporation
- Utility     Other

2. Size of Company: Number of Employees

- 1 to 99     100 to 499     500 to 999     1,000 to 1,999
- 2,000 to 4,999     5,000 or more

3. Business Description: (Briefly describe the type of business or activity at the facility)

4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility



# Completing an Application

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## **Section 5. Property Description, Applicable Rule, and Environmental Benefit**

For each piece or each category of pollution control property for which a use determination is being sought, answer the following questions.

*Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.*



# Completing an Application

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## Section 5. General Information

1. Name the property
2. Is the property used 100% as pollution control equipment?  
 Yes     No

Explain your answer



# Completing an Application

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## Section 5. General Information

3. Does the property generate a Marketable Product?

- Yes       No

*Marketable Product: Anything produced or recovered using pollution control property that is sold as a product, is accumulated for later use, or is used as a raw material in a manufacturing process.*

*Marketable product includes, but is not limited to, anything recovered or produced using the pollution control property and sold, traded, accumulated for later use, or used in a manufacturing process (including at a different facility).*

*If the answer is 'Yes,' describe the marketable product*



# Completing an Application

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## Section 5. General Information

4. What is the appropriate Tier I Table or Expedited Review List number?

5. Is the property integrated pollution control equipment?

- Yes       No

*If the answer is 'No,' separate applications must be filed for each piece of property.*

6. List applicable permit number(s) for the pollution control property.



# Completing an Application

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## Section 5. Incremental Cost Difference

7. Is the Tier I Table item number A-86, A-112, A-114, A-182, or S-22?     Yes     No

If the answer is 'Yes,' the use determination percentage is based on the incremental cost difference and you must answer the following questions:



8. What is the cost of the new piece of property?
9. What is the cost of the comparable property without controls?
10. How was the value of the comparable property calculated?





# Completing an Application

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## Section 5. Property Description

11. Describe the property. (What is it? Where is it located within the production process? How is it used to control, prevent, or monitor pollution?)

### **What constitutes an adequate description?**

A detailed description of the property that describes what the property is, where it is located at the facility (e.g., Baghouse installed on Production Line A), how it is used as pollution control equipment at the facility, the pollution it controls, and any material it recovers.

Example: A new fiber-bag baghouse (#1) was installed on the exhaust of Production Line A. The baghouse will collect particulate matter generated during the production process. The particulate matter is considered to be a waste material and will be sent to a landfill for disposal.



# Completing an Application

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## Section 5. Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property?  
The citation must be to the specific subsection, paragraph, subparagraph, or clause level.

### **What constitutes an appropriate rule citation?**

The citation must be specific to the section and the subsection, paragraph, subparagraph, or clause, of the adopted environmental rule or regulation that is being met or exceeded by the construction or installation of the property. The narrative must describe how the property is used to meet or exceed a requirement in the cited rule, regulation, or statutory provision.



# Completing an Application

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## Section 5. Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property?

### **What constitutes an adequate environmental benefit?**

The environmental benefit or pollution control must be directly related to the construction or installation of the property. For purposes of the application, 'environmental benefit or pollution control' does not include the prevention, monitoring, control, or reduction of air, water, and/or land pollution that results from the use or characteristics of the applicant's goods produced or services provided.



# Completing an Application

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## Section 6. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property.

### **What constitutes an adequate process description?**

Provide the necessary information to indicate where the property is located, listing all inputs and outputs, the pollutant(s) controlled, how the property controls the pollutant(s), and what happens to any materials removed or recovered by the property. Sketches, drawings, plot plans, or photographs may be substituted for Process Flow Diagrams in some cases.

*Note: If a Process Flow Diagram is not provided, TCEQ staff will determine when and if such information is essential to the use determination application and may require the subsequent submittal of a Process Flow Diagram.*



# Completing an Application

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## Section 7. Partial-Use Percentage Calculation

This section must be completed for all **Tier III applications**. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property.

The procedures and calculations specified in 30 TAC §17.17 must be used to calculate the partial-use percentage for Tier III applications, including those containing property located in one of the categories located on the Expedited Review List.



Additional information regarding partial-use percentage calculations, including an example, is available in the TCEQ regulatory guidance document, *Property Tax Exemptions for Pollution Control Property, RG-461* and as an Appendix to this presentation.



# Completing an Application

## Section 8. Property Categories and Costs

List each piece of property of integrated pollution control property for which a use determination is being sought.

*Attach additional response sheets to the application if more than five (5) pieces of property need to be listed.*

Property Name	Tier 1 Table No. or Expedited Review List No	Use Percent	Estimated Dollar Value
<b>Land:</b>			
<b>Property:</b>			
<b>Property:</b>			
<b>Property:</b>			
<b>Property:</b>			
<b>Total:</b>			

*Note: Separate applications, along with application fees, must be filed for each piece of nonintegrated pollution control property.*



# Completing an Application

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## Section 9. Type of Application and Fee

Type of Application being filed: *Select only one.*

- Tier I – Fee: \$150     Tier II – Fee: \$1,000  
 Tier III – Fee: \$2,500

Fee Payment Type

- Check     Money Order     Electronic Payment

Payment Receipt Number

Payment Amount

Payer Name on Payment

Total Amount of Payment

*Note: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.*

Information on electronic payments is located at this address:

<http://www.tceq.texas.gov/e-services>



# Completing an Application

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- TCEQ Delinquent Fee Protocol
  - Tax Relief Program cannot declare an application administratively complete if the applicant has total delinquent fees greater than or equal to \$25.
- Information regarding the TCEQ's Delinquent Fee Protocol is available at:  
<http://www.tceq.texas.gov/agency/delin/index.html>





# Completing an Application

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## Section 10. Certification Statement



"I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- Must be signed by owner or designated representative.
- Printed Name Date
- Signature
- Title
- Company Name

Under Texas Penal Code, §37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.



# Completing an Application

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## Application Submission

- Send the completed application and the appropriate fee, ***along with a complete copy of the completed application*** for the appraisal district, to:

*U.S. Mail*

Cashier's Office, MC 214  
Tax Relief Program  
TCEQ  
PO Box 13088  
Austin, TX 78711-3088

*Physical Address*

Cashier's Office, MC 214  
Building A  
TCEQ  
12100 Park 35 Circle  
Austin, TX 78753

If the fee has been paid electronically, the application can be mailed directly to the Tax Relief Program at the contact address provided later in the presentation.



# Application Review

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The application review process is divided into two parts

- Administrative Review
- Technical Review





# Administrative Review

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- TCEQ will determine if an application is administratively complete.
  - All of the required fields on the application form have an entry.
  - The proper fee has been paid.
- This review is conducted under 30 TAC §17.12(2)(A).
- The review is conducted using a checklist.
- The review is to be completed as soon as practicable.
- If application is not complete a notice of deficiency (NOD) is issued.
- The applicant has 30 days to respond to the NOD.
- If response to the NOD is not received within 30 days, the executive director shall take no further action on the application.
- If the first revised application is deficient a second NOD is sent.
- If the second revised application is not complete or a response to the second NOD is not received within the 30 days no further action will be taken on the application.



# Administrative NOD Issues

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- Common Application Errors
  - Failure to supply CN/RN or providing the wrong CN/RN
  - Failure to answer all questions
  - Providing contradictory answers
  - Failure to provide adequate rule citation
  - Failure to sign the application
  - Delinquent fees
  - Referring to an attachment rather than placing answers on application form
  - Failure to provide a copy of the application



# Administrative NOD Issues

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Failure to supply CN/RN or the wrong CN/RN

**To be declared administratively complete an application must include a valid CN and RN.**

- To determine if the owner has an assigned CN, search the TCEQ Central Registry at: <http://www.tceq.texas.gov/>
- If the owner has not been assigned a CN, instructions on how to obtain one are available at: [http://www.tceq.texas.gov/permitting/central\\_registry/guidance.html](http://www.tceq.texas.gov/permitting/central_registry/guidance.html). An RN will be assigned when applying for a CN.
- If applying for a CN, submit the Core Data Form with the application.



# Administrative NOD Issues

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## Failure to answer all questions



- Common areas left blank
  - Not providing an explanation to eligibility questions 6, 7, and 8 in Section 1
  - Question 2 of Section 2: Type of Mfg. Process or Service
  - Question 2 of Section 5. You must provide an explanation.
  - Question 3 of Section 5. If you answer "Yes" you must provide an explanation.
  - Questions 8, 9, and 10 of Section 5. If you answer "Yes" to question 7, you must provide answers for 8, 9, and 10.

**unanswered  
questions**



# Administrative NOD Issues

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- Common areas left blank (cont.)
  - Question 11 of Section 5. A description of the property must be provided.
  - Question 12 of Section 5. A rule citation must be provided.
  - Question 13 of Section 5. An environmental benefit must be provided.
  - The Table in Section 8 must be completed for all property included on the application.
  - An original signature and current date must be provided in Section 10.

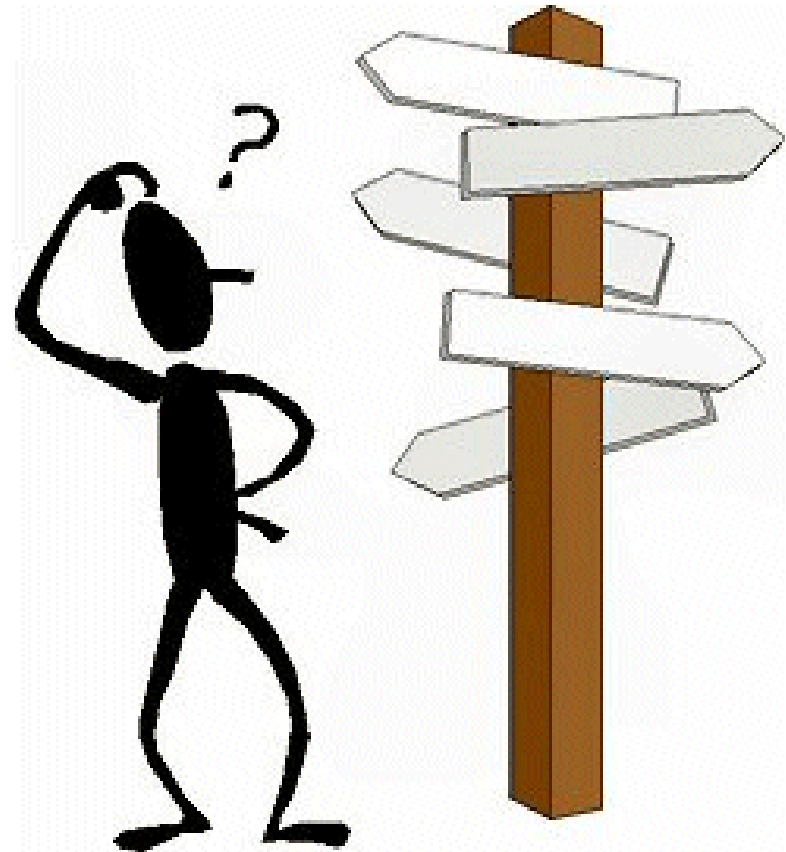




# Administrative NOD Issues

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- Providing contradictory answers
  - Stating that no marketable product is produced but then describing a marketable product in the property description or environmental benefit.
  - Property description is not consistent in all three places in the application that request property description information.
  - Pollutant being controlled is not consistent between the description sections, the rule citation, and the environmental benefit.





# Administrative NOD Issues

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- Failure to provide an adequate rule citation
  - "30 TAC Chapter 115" is not to the subsection level
  - Federal and Texas Clean Air Acts
  - U.S. Code sections requiring actions of EPA or states
  - Permit Number
  - U.S. Occupational, Safety, and Health Administration, U.S. Department of Housing and Urban Development, and the Texas Public Utilities Commission rules
  - Fire and Safety Codes
  - Local development codes that do not contain an environmental component



# Applicable Rule

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## Tips on Rules

- The application must describe how the property meets or exceeds an environmental rule, regulation, or statutory provision that has been adopted by a federal regulatory agency, the State of Texas, or a political subdivision of Texas. Regulations adopted by health and safety agencies, such as the Occupational Safety and Health Administration, do not meet this criteria.
- If you are uncertain of the specific rule to list in this section, many resources are available online.
- State rules are specified in the Texas Administrative Code.
  - Texas Railroad Commission rules: Title 16, Division 1
  - TCEQ rules: Title 30
- Other chapters may include other relevant regulations.

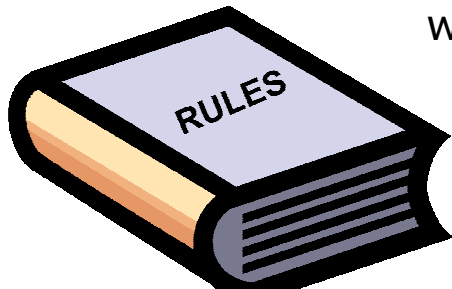


# Applicable Rule

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## Tips on Rules

- The federal rules are specified in the Code of Federal Regulations: Title 40 contains United States Environmental Protection Agency regulations; relevant regulations from other federal agencies are specified in other titles. Ordinances from cities and counties are often available at reliable websites.
- The following Internet sites may be helpful
  - Code of Federal Regulations (CFR) – [www.ecfr.gov/cgi-bin/ECFR?page=browse](http://www.ecfr.gov/cgi-bin/ECFR?page=browse)
    - Choose Title 40 from the drop down menu
  - State rules (TCEQ rules are codified in Title 30) – [www.sos.state.tx.us/tac/index.shtml](http://www.sos.state.tx.us/tac/index.shtml)





# Technical Review

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- This review is conducted under 30 TAC §17.12(2)(B) and (C).
- The review is conducted using a checklist.
- If not technically complete, a NOD is issued.
- The applicant has 30 days to respond.
- If response to NOD is not received within 30 days, the executive director shall take no further action on the application.
- If the response is deficient, a second NOD is sent.
- If the response to second NOD is not complete or is not received within 30 days, no further action will be taken.
- Technical review process is limited to 230 days from administrative complete date.
- A negative determination will be issued for applications that are not technically complete after 230 days.



# Technical Review: Tier I

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- Specific Review Questions for Tier I Applications
  - Is the property listed in the application located on the Tier I Table?
  - Is the appropriate Tier I Table number listed?
  - Is the property listed in the application used for pollution control purposes at the same use percentage as what is listed in the Tier I Table?
  - Does the application provide sufficient information to ensure that no marketable product (not including materials that are disposed) is being generated from the use of the property?



# Technical Review: Tiers II & III

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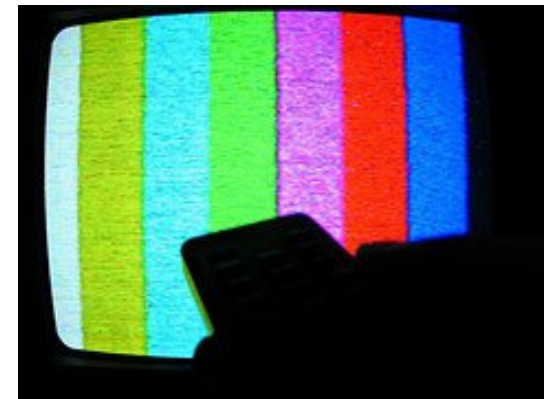
- Specific Review Questions for Tier II Applications
  - Is the property listed in the application not located on the Tier I Table but used 100% for pollution control purposes?
  
  - If an Expedited Review List (ERL) number is listed in the application, does the property match the description listed in the ERL?
  
  - Is sufficient information provided to ensure that no marketable product (not including materials that are disposed) is being generated from the use of the property?
  
- Specific Review Questions for Tier III Applications
  - Are the calculations and explanation for a partial use determination provided?



# Common Technical NOD Issues

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- Failure to provide the appropriate Tier I Table number
- Failure to cite to the specific subsection of the adopted environmental rule
- Providing contradictory answers
- Incomplete answers in the table located in Section 8
- Citing a permit rule without providing permit number
- Failure to explain what happens to material generated or captured by use of the property
- Inadequate description
- Inadequate environmental benefit
- Failure to correctly use the Cost Analysis Procedure







# Responding to a NOD Letter

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- Answer all questions fully
- Respond on time
  - NOD letters list a response due date.
  - Failure to respond in a timely manner can result in your application being closed.
- If you can't respond within the 30-day period, request an extension.
  - Extensions are limited to two weeks.
  - Limit of two extensions per NOD may be granted.





# Responding to a NOD Letter

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- TCEQ staff is happy to help
  - If unsure how to answer a question, contact the TCEQ staff listed in the letter.
  - Corresponding by e-mail allows both parties to document the conversation and allows staff the opportunity to research their response.
  - Please remember that TCEQ staff are not consultants and are not allowed to provide consulting services.
  - TCEQ staff cannot tell you how to answer a question. We can and will identify resources to search for help.





# Responding to a NOD Letter

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Submit the Revised Application/NOD Response before or on the date specified in the letter to:

*U.S. Mail Address*

Tax Relief Program, MC 110  
TCEQ  
PO Box 13087  
Austin, TX 78711-3087

*Physical Address*

Tax Relief Program, MC 110  
TCEQ, Building F  
12100 Park 35 Circle  
Austin, TX 78753



# Completion of Review Process

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- The outcome of the technical review process is a:
  - Positive use determination;
  - Negative use determination;
  - Partial use determination; or
  - Withdrawn or returned application.





# Appeal Process

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- The Final Determination may be appealed by the applicant or the appraisal district within 20 days after receipt.
- The commission may either deny the appeal or remand the matter to the executive director.
- The use determination and the initial appeal must be completed within one year of the application being declared administratively complete.





# Program Documents

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- All documents are available on TCEQ's website:  
<http://www.tceq.texas.gov/airquality/taxrelief>
  - *Use Determination for Pollution Control Property Application*  
(Form TCEQ-00611)
  - Instructions for completing the application form
  - TCEQ regulatory guidance document



# Coming Soon

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Online Application Submittal





# Program Contacts

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Program E-Mail:

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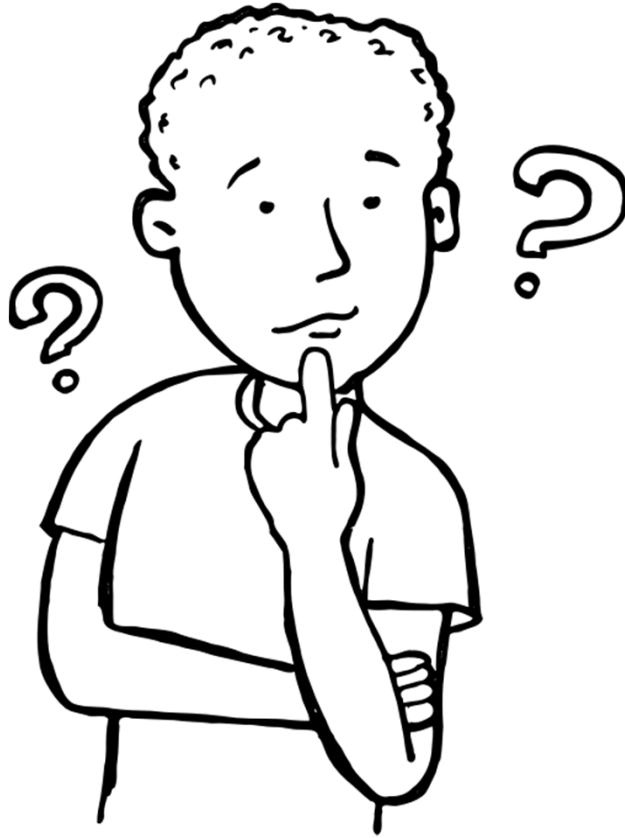






# Questions?

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## Appendix: Tier III Calculation

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- The Cost Analysis Procedure (CAP) located in 30 TAC §17.17 must be used to calculate a partial use determination.
- The purpose of the CAP is to determine the incremental cost of providing pollution control. The incremental cost is the difference in cost between the new and the old equipment minus the net present value of any marketable product generated by the equipment.
- The CAP is designed to determine the creditable partial percentage for property that is used only in part for pollution control. If the CAP produces a negative number or zero, then there is no creditable partial percentage for the property and a positive use determination cannot be issued.



# Appendix: Tier III Calculation

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The equation is:

- $\left\{ \frac{((PCF \times CCN) - CCO - NPVMP)}{CCN} \right\} \times 100$
- *Production Capacity Factor* (PCF) is a calculated value used to adjust the capacity of the new equipment or process to the capacity of the existing equipment or process.

$$\text{Production Capacity Factor} = \frac{\text{Production Capacity of Old Property}}{\text{Production Capacity of New Property}}$$



# Appendix: Tier III Calculation

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- *Capital Cost New (CCN)*: The estimated total capital cost of the new property or process.
- *Capital Cost Old (CCO)*: The cost of comparable property or process without the pollution control. Use the following standards for calculating CCO:
  - Standard 1: If comparable property without the pollution control is on the market in the United States, then an average market price of the most recent generation of technology must be used.
  - Standard 2: If the conditions in Standard 1 do not apply and the owner is replacing an existing property that already has received a positive use determination, the owner shall use the CCO from the application of the previous use determination.



# Appendix: Tier III Calculation

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- Standard 3: If the conditions in Standards 1 and 2 do not apply and the owner is replacing an existing property, then the owner shall convert the original cost of the property to today's dollars by using a published industry-specific standard. If the production capacity of the new property or process is lower than the production capacity of the old property or process, CCO is divided by the PCF to adjust CCO to reflect the same capacity as CCN.
- Standard 4: If the conditions in Standards 1, 2, and 3 do not apply and the owner can obtain an estimate of the cost to manufacture the alternative property without the pollution control, then an average estimated cost to manufacture the property must be used. The comparable property must be the most recent generation of technology. A copy of the estimate, including the specific source of the information, must be provided with the worksheet that is required to be attached to the application.



## Appendix: Tier III Calculation

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- Net Present Value of Marketable Product (NPVMP) is the net present value of the marketable product recovered for the expected lifetime of the property and is calculated using the following equation:

$$NPVMP = \sum_{t=1}^n \frac{(\text{Marketable Product Value} - \text{Production Cost})_t}{(1 + \text{Interest Rate})^t}$$

- Marketable product includes, but is not limited to, anything recovered or produced using the pollution control property and sold, traded, accumulated for later use, or used in a manufacturing process (including at a different facility). Marketable product does not include any emission credits or emission allowances that result from installation of the pollution control.



# Appendix: Tier III Calculation

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- Marketable Product Value (MPV) may be calculated two ways:
  - The average retail value of the product produced by the property for one-year periods. Typically, the most recent three-year average price is used. If the price varies from state to state, the applicant must calculate an average and explain how the figures were determined.
  - If the material is used as an intermediate material in a production process, then the value assigned to the material for internal accounting purposes may be used. It is the responsibility of the applicant to show that the assigned value is comparable to the value assigned by other similar producers of the product.



## Appendix: Tier III Calculation

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- Production Cost (PC) – The costs directly attributed to the production of the product, including raw materials, storage, transportation, and personnel, but excluding non-cash costs, such as overhead and depreciation.
- $n$  – The estimated useful life in years of the property that is being evaluated for a use determination.
- Interest Rate – 10%
- $t$  – The sequential number for time in years 1 to  $n$ . The numerical value for  $t$  is used as the value of the exponent for the denominator and only as an identifier of the calculation sequence in the numerator. For example, where  $n$  is 6 years,  $t = 1$  in year one,  $t = 2$  in year two, and so on in sequence, up to year six. The values for MPV and PC in each calculation should equate to those values estimated for year one, year two, year three and so on in sequence, up to year six. The NPVMP would be the sum of all six calculations.





# Appendix: Tier III Calculation

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## Example: Cost Analysis Procedure

- Type of Property: Dust Collection System
- Analysis: As a result of an increase in production capacity, a facility installs a larger dust collection system. The material collected is considered to be a co-product and is sold to another owner. The previous dust collection system received a positive use determination in 2002.
- Costs related to this project are:
  - Capital Cost New = \$20,000,000
  - Capital Cost Old = \$5,000,000
  - Production Capacity Old = 100 tons per year
  - Production Capacity New = 150 tons per year
- Which results in a PCF of 0.67



## Appendix: Tier III Calculation

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- Useful Life = 10 years
- Interest Rate = 10%
- Co-Product Value: Per Year = \$100,000
- Co-Product Production Costs Per Year = \$50,000
- Which results in a Marketable Product Value of \$50,000 per year
- Net Present Value of Marketable Product = \$307,228
- *CAP Equation* =  $\frac{(.67 \times 20,000,000) - 5,000,000 - 307,228}{20,000,000} = 0.40 = 40\%$

Therefore, using the equation specified in the CAP as shown in Figure 1, 40% of the capital cost of the new dust collection system would be eligible for a partial use determination.