



Arnold Schwarzenegger
Governor

STYLE MANUAL

PREPARING PUBLIC INTEREST ENERGY RESEARCH (PIER) PROGRAM TECHNICAL RESEARCH PROJECT REPORTS

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Preface

These guidelines are intended to assist California Energy Commission contract, grant, or work authorization managers and contractors when preparing a Public Interest Energy Research (PIER) Program project report that is the result of technical research funded via a contract, grant, or work authorization.

Be sure to check these guidelines and talk with your Energy Commission contract, grant, or work authorization project manager before starting **any** PIER Program technical research project report. If your contract, grant, or work authorization is for technical research that results in an interim or final report, please follow this manual.

Although this manual is formatted in PIER styles, not all of its elements replicate those of a PIER report. The most recent version of this manual and the templates that can be used to develop PIER reports are located at:

www.energy.ca.gov/contracts/pier/contractors

Your project's contract, grant, or work authorization Terms and Conditions may provide additional information about producing PIER Program project reports or other printed materials.

If you are not sure these guidelines apply to your report, or if you have any questions about the information in the guidelines, please contact your Energy Commission contract, grant, or work authorization manager, or e-mail Energy Commission staff at TechTransfer@energy.state.ca.us.

Contact information for the main PIER offices is available under the Energy Research & Development Division listing at www.energy.ca.gov/commission/phone_list.html.

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Table of Contents

Preface.....	i
Abstract	v
1.0 Roles and Responsibilities for Preparing PIER Project Reports	1
2.0 Publication Steps for PIER Project Reports	3
3.0 Preparing Accurate, Consistent PIER Project Reports	5
4.0 Editorial Style for PIER Project Reports	7
Acronyms and Abbreviations.....	7
Capitalization	7
Citations Within the Text	10
Internet and E-mail Addresses.....	10
Miscellaneous	10
Numbers.....	11
Punctuation.....	12
Serial Comma	12
Bulleted Lists	12
Commas with Dates	13
Compound Adjectives	13
Special Characters and Symbols.....	13
Writing Style	13
5.0 Content for PIER Project Reports.....	15
Report Sections	15
PIER Project Cover Page, Credits Page, and Disclaimers	16
Cover Page.....	16
Credits Page	16
Additional Legal Disclaimers.....	16
Acknowledgments and Citation Page.....	16
Acknowledgments.....	17
Citation.....	17
Preface.	18
Table of Contents	19
Abstract	20
Executive Summary	20
Introduction	21
Project Approach (or Methods).....	21
Project Outcomes (or Results)	21
Conclusions and Recommendations.....	22
References.....	22
Glossary	23
Bibliography.....	23

Appendices.....	23
Attachments	24
6.0 Formatting PIER Project Reports.....	25
Format Styles.....	25
Blank Pages.....	25
Pagination	25
Page Breaks.....	26
Figures and Tables.....	26
Footnotes	26
Table of Contents	27
Appendices and Attachments.....	27
Copyright and Permissions.....	27
Appearance in Table of Contents	27
Preparing Appendices	27
Preparing Attachments	29
7.0 Formatting Style Matrix for PIER Project Reports	31
8.0 Submitting Reports to the Energy Commission	37
Microsoft Word Files	37
Graphic Files and Photographs	37
9.0 Use of the California Energy Commission Seal.....	39

Abstract

This report is the manual of style to be used when writing reports funded by the California Energy Commission's Public Interest Energy Research (PIER) Program. This document helps PIER Program project teams write interim and final project reports that meet the Energy Commission's requirements for technical research report content, style, and format. This document will be published online with links from the PIER and Contracts Office Web pages. Microsoft® Word files for the PIER styles template, cover, and credits pages can be downloaded from those Web pages as well.

This document may be revised as the Energy Commission deems necessary. Please check for the latest version at www.energy.ca.gov/contracts/pier/contractors.

Keywords: Public Interest Energy Research (PIER) Program, writing, style manual, technical project report, project report, interim project report, final project report, publication process, report preparation, report format

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1.0 Roles and Responsibilities for Preparing PIER Project Reports

CURRENTLY UNDER DEVELOPMENT

Please note that this page is normally left blank and is the back side of the final odd page of Chapter 1. It is inserted so Chapter 2 will begin on an odd-numbered page. Usually no information is included on this page, nor is there text that says "this page left intentionally blank." This blank page must be included for the report to print two-sided pages properly.

2.0 Publication Steps for PIER Project Reports

CURRENTLY UNDER DEVELOPMENT

Please note that this page is normally left blank and is the back side of the final odd page of Chapter 2. It is inserted so Chapter 3 will begin on an odd-numbered page. Usually no information is included on this page, nor is there text that says "this page left intentionally blank." This blank page must be included for the report to print two-sided pages properly.

3.0 Preparing Accurate, Consistent PIER Project Reports

Before you begin writing, put on the hat of an inquisitive, reasonably well-educated lay reader. Pretend that they paid for this research and want to understand how and why you spent their money. That's your audience. Even though research colleagues may be the only people who read your report, you need to make the writing clear and understandable to a larger audience. Your reader may not speak or read English as a first language. So, you must write clearly and concisely.

Here are some suggestions to keep in mind as you write the report:

- Apply the test of completeness. Are all the pieces there? Are all the references clear and do those in the text match those in the reference section? Are the relationships between the partners and the players clearly explained?
- Apply the test of logic. Does the document flow and make sense? Is the need for the research clearly described? Is the technical approach clearly described? Do the conclusions make sense? Are they drawn from the analysis? Do the numbers check? Is it clear how the numbers were derived?
- If the project did not do everything it intended to do, explain.
- The final report must primarily address the project scope (that is, the funded, contracted research agreement scope of work). Where appropriate, clearly differentiate the overall or larger program scope from the funded, contracted research agreement scope of work and explain the context. Do not intermingle comments about the larger program with comments about the funded, technical research contract, grant, or work authorization research project.
- There needs to be a clear relationship between project objectives and outcomes.
- The methods used to conduct the research need to be explained.
- Data that are presented in the report need to be analyzed. If you present a picture, graph, or table, be sure you discuss it in the text. Do not just refer to it. **Also, provide the graphic's data source file when submitting your report to the Energy Commission.** Remember, not everyone wants to or can print in color, so it is best if your graphic can also be copied in black and white. Apply the "would this be clear if it were faxed?" test.
- Each conclusion needs to be substantiated by the analysis contained in the report.
- Figures and tables must clearly relate to and be consistent with the text, and vice versa. (If the text says the generator had a capacity of 30 kilowatts, the table should not say it was 31.2 kilowatts.)
- Use consistent references to report performance specifications and results. For example, if a piece of equipment is to be referred to by its nominal nameplate rating, then use that reference consistently throughout the report. If, however, the desired number was the measured performance of the device (almost always different from nameplate), then consistently use that measured number. Do not mix the two in the narrative.

- The text needs to clearly refer to the attached appendices. It should also explain how the material in the appendices relates to the text. If the information does not really matter, the appendix probably should be dropped. (You may still need it because it is a deliverable according to the contract agreement, so check this carefully.) References to multi-page appendices need to be specific to the page or section of the appendix, not just a general reference to “Appendix B.” Appendices carry their own page numbering; see Chapter 6 for instructions.

If you have a question about what the report should include, contact your Energy Commission contract, grant, or work authorization manager to discuss the report. Make sure you understand all the required parts.

4.0 Editorial Style for PIER Project Reports

General rules for good writing should be applied to all reports and other written materials funded by the PIER Program. The following books are recommended to assist authors in developing good writing habits:

Associated Press, The. *The Associated Press Stylebook and Libel Manual*. Perseus Books, 2006. ISBN: 0201339854.

Cappon, Rene J. (Editor). *The Associated Press Guide to Punctuation*. Perseus Publishing, 2003. ISBN: 0738207853.

Fiske, Robert Hartwell. *The Dictionary of Concise Writing: 10,000 Alternatives to Wordy Phrases*. Marion Street Press, 2002. ISBN: 0966517660.

Sabin, William A. *The Gregg Reference Manual (10th Edition)*. McGraw-Hill Irwin, 2005. ISBN: 0072936533.

Strunk, William, Jr., E. B. White, and Roger Angell. *The Elements of Style, Fourth Edition*. Longman, 2000. ISBN: 020530902X.

Style Manual Committee, Council of Science Editors. *Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers (7th Edition)*. University of Cambridge, 2006. ISBN: 097796650X.

University of Chicago Press. *The Chicago Manual of Style (15th Edition)*. University of Chicago Press, 2003. ISBN: 0226104036.

These books may disagree on points of editorial style. Choose one book and stick with that as your guide.

Acronyms and Abbreviations

An acronym is an abbreviation made up of the initial letters of a group of words and is pronounced as a single word. For example, HVAC (heating, ventilation, and air conditioning) is pronounced H-VAC. Abbreviations are the initial letters of a group of words but cannot be pronounced as a single word. The Energy Commission uses these two terms interchangeably, most often including abbreviations under the umbrella of acronyms.

Use acronyms sparingly when using terms over and over.

This does not mean, however, that acronyms should be made up as a form of shorthand. This style of writing excludes the reader by introducing words that are only known to a “select few.”

An acronym should benefit the reader; not cause them to stop reading and start hunting for the first time the acronym was used.

Acronyms will be allowed at the discretion of the Energy Commission’s editors.

Follow these rules when using acronyms or abbreviations.

- Do not make up acronyms as shorthand for a group of words.

- Introduce acronyms by first using the full term, followed by the acronym in parentheses.
- Energy Commission style does not allow the use of most acronyms in the Abstract and Executive Summary because these elements are often read by a broader audience that may be less familiar with the subject matter. The list below in **Table 1** shows a number of common acronyms that may be used in the Abstract and Executive Summary after first spelling out the full word(s).
- Do not use the abbreviation “CEC” in reports or in other written materials, except if used in a table heading where space is critical.

Use “California Energy Commission” at first mention, and then use “Energy Commission” throughout the rest of the report.

You may use just “Commission” in subsequent references in the same paragraph as long as no other commissions are being mentioned. Return to using the full two words Energy Commission in subsequent paragraphs.

- Do not introduce and use an acronym if it only appears once or twice in close proximity. Rare exceptions would be cases where readers are more familiar with the acronym than its actual referent.
- Do not use the U.S. Postal Service two-letter abbreviations for states in the United States. Instead, use the full state name (for example, Sacramento, California) or the “longer” abbreviation (such as Los Angeles, Calif.).

Table 1: Common Acronyms and Abbreviations

Original Term	Acronym/Abbreviation
California Energy Commission	Energy Commission
British thermal unit	Btu
California Air Resources Board	ARB (not CARB)
California Department of Water Resources	DWR
California Environmental Protection Agency	CalEPA
California Independent System Operator	California ISO (not CAISO or Cal-ISO)
(California) Public Utilities Commission	CPUC
carbon dioxide	CO ₂ or CO2 (Note: The 2 can be a subscript, but make sure it is not too small to read.)
cubic feet per minute	CFM
(United States) Department of Energy	U.S. DOE
Energy Action Plan	Energy Action Plan (not EAP)
Energy Efficiency Ratio, Seasonal Energy Efficiency Ratio	EER, SEER
ENERGY STAR®	ENERGY STAR® on first reference, followed by ENERGY STAR thereafter
Federal Energy Regulatory Commission	FERC
gigawatt / gigawatt-hour	GW / GWh
Heating, ventilation, and air conditioning	HVAC
Integrated Energy Policy Report	IEPR
kilovolt	kV
kilowatt / kilowatt-hours	kW (small k, capital W) / kWh
liquefied natural gas, liquefied petroleum gas	LNG, LPG
Los Angeles Department of Water and Power	LADWP
MCF	Use MCF on first reference, but in parentheses say (1000 cubic feet of natural gas).
megawatt / megawatt-hour	MW (all capitals) / MWh
Nitrogen Oxides	NO _x or NO _x
Nuclear Regulatory Commission	NRC
Organization of Petroleum Exporting Countries	OPEC
Pacific Gas and Electric Company	PG&E
photovoltaic	PV
Public Interest Energy Research Program	PIER Program
quadrillion British thermal units	quad
research, development, and demonstration	RD&D
Sacramento Municipal Utility District	SMUD
San Diego Gas & Electric Company <i>Note: The word "and" is not used in the company's full name. An ampersand [&] is the correct usage in the company's full name.</i>	SDG&E
Southern California Edison Company	SCE
Southern California Gas Company	SoCal Gas
sulfur dioxide	SO _x
United States	United States (not U.S. unless it proceeds an abbreviation for a federal agency)
United States Environmental Protection Agency	U.S. EPA (not EPA)

Capitalization

Do NOT capitalize:

- Use “state” unless the text specifically says “the State of California.”
- Use “energy crisis,” not Energy Crisis.
- Use “project” or “program” unless it is an official part of a name or title, such as the Sunrise Transmission Project or PIER Program.
- Use “website,” not Website or Web site.

Capitalize:

- Governor, Legislature, Senate, and Assembly (when pertaining to California).
- Northern California, Southern California.
- ZIP code.

Citations Within the Text

PIER reports use the author-date system of citation in the text, as follows: (Author 2004). There is no comma between the author’s name and the date. For multiple citations, please use the following style: (Brown 2004; Goodwin and Hersch 2002; Alert et al. 2000; Kumis 2004a, 2004b). The full citation should be included in the report’s references.

Internet and E-mail Addresses

Microsoft Word can be configured to automatically create hotlinks to Internet addresses (URLs) and a mail-to link for e-mail address. Creating the hotlink changes the text to blue and underlines the text. When a reader clicks on the link, the text color changes to purple. When the Word file is converted to Adobe® Acrobat®, Acrobat usually incorporates the hotlinks. Please make sure the URLs are correct.

If possible, avoid splitting Internet addresses across two lines.

Miscellaneous

- Use only **one space** between sentences and after a colon.
- Use “smart” (also called curly or typographic) quotes and apostrophes.
- Use an en dash (–) between a range of numbers. From the Insert menu, select Symbol → Special Characters → en dash.
- Use an em dash (—) instead of a double hyphen (--). Do not add a space before or after the em dash.
- Use *italics*, not quotation marks, to introduce new technical terms. Include such terms in the glossary if appropriate.
- Every graph and table requires a **source** line beneath it, unless the data were obtained by the author(s) during the course of the project. In any event, the data source should always be clear.

- Write out “percent” in the executive summary. Use the symbol “%” in the main body of the report.
- **Italicize** the name of all books and reports. For example: *2005 Integrated Energy Policy Report* and *2004 Energy Policy Report Update*. Do not underline. If the information cited is from a journal, the article title should be in quotation marks and the journal name in italics.
- Use brackets for parenthetical material within parentheses ([]).

Numbers

- In a list in linear text, use numbering (in parentheses) to indicate the order in which tasks should be done, to suggest chronology or relative importance among the items, or to clearly separate the items, as in the following examples:

When repairing the machine, the researchers (1) gathered the parts, (2) assembled the subsystems, (3) connected the subsystems, and (4) conducted tests to establish baseline performance.

When evaluating the policy, researchers considered (1) wind turbines, both old and new; (2) energy conservation programs that encourage consumers to reap the benefits of off-peak electricity; and (3) photovoltaic installations—including emerging technologies that use thin-film materials—in regions with superior insolation.

Otherwise, do not use numbering, as in the following example:

There are three key drivers of natural gas prices: supply, demand, and storage capacity.

- Always use commas in numbers that are five digits or larger: 12,400; 240,000. Commas can be inserted in four-digit numbers when they are used in tables or columns.
- Use numerals for 10 and above; spell out numbers under 10, EXCEPT:
 - Percentages (2 percent).
 - Dates (June 2, 2005).
 - Page numbers (page 6).
 - Chapter numbers (Chapter 4).
 - Energy increments (1 megawatt, 9 kilowatts).
 - Sentences that include a list of identical items, some of which are fewer than 10 and some are more: “The project ran 2 trials in April, 5 in May, and 14 in June.”
 - Table and figure numbers (Table 4, Figure 6).
- Never begin a sentence with a numeral, including a year. “The energy crisis began in 2000,” NOT “2000 marked the year the energy crisis began.”
- Use the metric system (International System of Units, or SI) or English units—whichever is most appropriate to the report. When referring to temperatures, however, use Celsius along with Fahrenheit following in parentheses. For example: 100°C (212°F). Note that there should not be a space between the temperature, the degree symbol, and the letter. For executive summaries, use both SI and English units of measurement to support a

greater understanding by a lay audience. Use of standard English measures (e.g., acre-foot, two-by-fours) is always appropriate.

Punctuation

Serial Comma

Use a serial comma style throughout the report. For example: “The research team tested the first, second, and third models.” The comma after “second” is the serial comma.

In a serial list, if an element of the list has multiple units that need to be separated with commas, use a semicolon instead of a comma between the main elements, as in the first example under Bulleted Lists, below.

Bulleted Lists

Consider using a bulleted list for complicated sentences like the following example:

This report provides policy recommendations to conserve resources; protect the environment, the economy, and public health and safety; and ensure reliable, secure, and diverse energy supplies.

The above is correct, but it is clearer if bullets are used:

This report provides policy recommendations to:

- Conserve resources.
- Protect the environment, the economy, and public health and safety.
- Ensure reliable, secure, and diverse energy supplies.

In bulleted lists, use “parallel construction” for the items in your list. For example, if one item starts with a verb, all items should start with a verb; if one item begins with a noun, all items should begin with a noun, and so forth.

Use the following guides for punctuating bulleted lists:

- Start each bulleted element with a capital letter.
- In most cases, place a period at the end of each listed element. Thus, use a period after any “long” element in the list—*independent clauses, dependent clauses, or long phrases*. Also use periods after short phrases that are essential to the grammatical completeness of the statement introducing the list. However, no periods are needed after short phrases that are grammatically independent of the introductory statement, or if the listed items are like those on an inventory sheet or a shopping list.

Commas with Dates

Do not put a comma between a month and a year (July 2006), but do put a comma between a day and a year and after the year if in a sentence. For example: The Declaration of Independence was signed on July 4, 1776, in Philadelphia, Pennsylvania.

Compound Adjectives

Many compound adjectives are hyphenated when they come before a noun: “investor-owned utilities.” They are not hyphenated when they come after the verb: “The utilities are investor owned.”

Do not hyphenate compound adjectives starting with “—ly” adverbs: “publicly owned,” NOT “publicly-owned”; “newly created,” NOT “newly-created.” But hyphenate compound adjectives with adverbs that do not end in “ly”: “well-designed equipment.”

Special Characters and Symbols

Microsoft Word has a listing of special characters that can be used when typing. To view the special characters, go to Insert → Symbol. These special characters make use of the “Symbol” typeface that comes with and is installed by Microsoft Word. These special characters are the same across computer platforms. For symbols that are not in a standard typeface or font family, please contact the PIER contract manager to discuss using them in a report.

Writing Style

- Use the active voice whenever possible: “The petroleum industry is building new storage facilities,” NOT “New storage facilities are being built by the petroleum industry.”
- The Energy Commission does not allow use of the first person (referring to the authors) in technical reports. This is not to say that you should write in the passive voice—it is possible to write in the third person and still use active voice. For example:

Instead of third person **passive** voice: “It was found by the research team that...”

Use third person **active** voice: “The research team found that...” or “The study found that...” or “Results showed that...”

Writing in the third person requires that the authors refer to themselves as though they were referring to a third party:

First person: “We tested 12 different devices...”

Third person: “The authors (or “The research team” or “This project” or some other similar third-party reference) tested 12 different devices...”

- Eliminate excess words. For example: “To calculate the emissions...” NOT “In order to calculate the emissions...”
- Avoid verbal nouns. For example: “The team analyzed...” NOT “The team conducted an analysis of...”

Please note that this page is normally left blank and is the back side of the final odd page of Chapter 4. It is inserted so Chapter 5 will begin on an odd-numbered page. Usually no information is included on this page, nor is there text that says “this page left intentionally blank.” This blank page must be included for the report to print two-sided pages properly.

5.0 Content for PIER Project Reports

Report Sections

PIER project reports contain the following sections, in the following order:

1. Cover page (required).
2. Credits page (required) with Legal Disclaimer (required). The Energy Commission disclaimer is **ALWAYS** included. Disclaimers from other agencies or organizations are optional and should be placed on the otherwise blank page following the credits page (the back side of the credits page when printing double sided).
3. Acknowledgments page (acknowledgments are optional; the mandatory citation typically appears here).
4. Citation (required). Normally, the citation appears at the bottom of the acknowledgments page. If there are no acknowledgments, the citation appears at the bottom of the preface or the “back side” of the credits page (see instructions later in this chapter).
5. Preface (required boilerplate).
6. Table of Contents (required, followed by List of Figures and List of Tables, if needed).
7. Abstract, including Keywords (required).
8. Executive Summary (required).
9. Introduction (required).
10. Project Approach [or Methods] (required for final reports).
11. Project Outcomes [or Results] (required for final reports).
12. Conclusions and Recommendations (required for final reports).
13. References (if applicable).
14. Glossary (if more than 10 acronyms are used, this is required).
15. Bibliography (if applicable).
16. Appendices (if applicable).
17. Attachments (if applicable).

Except in very short reports (20 pages or less), each section must start on a new right-hand, odd-numbered page. Even in short reports, “front matter” sections and the executive summary should always start on a new page. If the preceding section ends on an odd-numbered page, insert a blank page to make the next section begin on the right-hand, odd-numbered page.

To view an example of a properly formatted PIER report, please see:

www.energy.ca.gov/contracts/pier-contractors/

PIER Project Cover Page, Credits Page, and Disclaimers

PIER cover and credit pages use PIER templates, which are available from the Energy Commission's website at www.energy.ca.gov/contracts/pier-contractors. Complete the information as fully as you can. You will be asked to provide the following information on those pages:

Cover Page

- Title of the report
- Type of report (e.g., interim or final)
- Author's company, organization, or affiliation
- Logo of author's company, organization, or affiliation, if desired

The Energy Commission will insert the publication number and month of publication, unless previous arrangements have been made.

Please contact the PIER **Technology Transfer Office** for additional cover page guidance if the research is being done by a collaborative that may have multiple sponsors.

Credits Page (Note: The credits page was previously called the "title" page)

- PIER logo (PIER will provide this)
- Author's company, organization, or affiliation
- Name of primary author(s) or principal investigator(s)
- Location of author's company, organization, or affiliation (city, state, and ZIP code)
- PIER Agreement number (contract, grant, work authorization, and /or project number[s], as applicable)
- PIER program area
- Name of PIER contract, grant, or work authorization manager
- Name of PIER project manager (if different)
- Name of PIER program area lead (PIER can fill this in)
- Name of PIER office manager (PIER can fill this in)

The Energy Commission disclaimer is provided on the PIER credits page template.

The credits page should be only one page long. If more space is required, then please contact your PIER contract, or grant, or work authorization manager or the Technology Transfer Office.

Additional Legal Disclaimers

The California Energy Commission's legal disclaimer is provided on the PIER credits page template. If any other participating organization needs a legal notice on the document, please provide it on the page following the credits page (i.e., the back of the credits page when printing double sided).

Acknowledgments and Citation Page

This page comes before the preface and table of contents and is where page numbering begins with lowercase roman numerals (i).

Acknowledgments

This section acknowledges or expresses appreciation to those who participated in the project. It may be a paragraph or a bulleted list of names and, if appropriate, their affiliations.

Acknowledgments are optional. If acknowledgments are not included, do not create an acknowledgments page simply for the citation. Instead, put the citation at the bottom of the preface page. If there is no room at the bottom of the preface, then list the citation at the bottom of the blank page following the credits page (back side of credits when printing double sided).

Citation

It is **mandatory** to include a **citation** for your report in the following style:

- Author last name, Author first name (or initial).
Note: If there are multiple authors, list with chief researcher's name first, or list alphabetically. First name in the series should have the last name followed by first name; then followed by second first name, second last name, and so forth. Use commas between authors' names.
- Year of publication.
- Report title in italics.
- California Energy Commission, PIER [insert RD&D program area] Program.
- Energy Commission publication number. Format for publication number is CEC-500-YEAR-XXX. Note: If not assigned, the Energy Commission will fill in the Xs.

Typically, the citation is located at the bottom of the acknowledgments page. As stated, if there are no acknowledgments, the citation should go at the bottom of the preface page, or if there is no room there, place it at the bottom of the blank ("back side") page following the credits page.

Citation Examples

Please cite this report as follows:

Wolman, H., and R. E. Moon (Engineering International). 2006. *Widgets and More*. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2006-XXX. (That is, Woolman and Moon work for Engineering International, so this optional method of listing authors incorporates both the authors and the company they work for.)

Additional examples:

San Francisco Public Utilities Commission. 2006. *Hetch Hetchy Case Study*. California Energy Commission, PIER Renewable Energy Technologies Program. CEC-500-2006-002.

Boles, Steve, Steve Folking, Pamela Green, Changsheng Li, and William P. Salas. 2006. *Estimating Irrigation Water Use for California Agriculture: 1950s to Present*. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2006-057.

Preface

Use the following preface verbatim. It is available on the PIER contracts page at:

www.energy.ca.gov/contracts/pier-contractors

In the next-to-last paragraph, fill in the report title; type of report; contract, grant, or work authorization name and number; organization conducting the research; and PIER program area (one of the eight research areas in the bulleted list).

Preface

The Public Interest Energy Research (PIER) Program supports public interest energy research and development that will help improve the quality of life in California by bringing environmentally safe, affordable, and reliable energy services and products to the marketplace.

The PIER Program, managed by the California Energy Commission (Energy Commission), conducts public interest research, development, and demonstration (RD&D) projects to benefit California.

The PIER program strives to conduct the most promising public interest energy research by partnering with RD&D entities, including individuals, businesses, utilities, and public or private research institutions.

PIER funding efforts are focused on the following RD&D program areas:

- Buildings End-Use Energy Efficiency
- Energy Innovations Small Grants
- Energy-Related Environmental Research
- Energy Systems Integration
- Environmentally Preferred Advanced Generation
- Industrial/ Agricultural/ Water End-Use Energy Efficiency
- Renewable Energy Technologies
- Transportation

[Report title in italics] is the [final or interim—select one] report for the [project name] project (contract number XXX-XX-XXX, work authorization number [insert #] or grant number [insert #]) conducted by [research entity]. The information from this project contributes to PIER's [insert RD&D program area from bulleted list above] Program.

For more information about the PIER Program, please visit the Energy Commission's website at www.energy.ca.gov/pier or contact the Energy Commission at 916-654-5164.

Table of Contents

Sections to be included in the table of contents are listed below. Titles for the Project Approach, Project Outcomes, and Conclusions and Recommendations chapters may vary—the other section titles are mandatory. Chapter numbers may also change depending on the report.

- Preface (required)
- Abstract and Keywords (required)
- Executive Summary (required)
- Chapter 1. Introduction
- Chapter 2. Project Approach [or Methods]
- Chapter 3. Project Outcomes [or Results]
- Chapter 4. Conclusions and Recommendations
 - Conclusions (required)
 - Commercialization Potential (if applicable)
 - Recommendations (required)
 - Benefits to California (required)
- Chapter 5. References (if applicable)
- Chapter 6. Glossary (if applicable)
- Chapter 7. Bibliography (if applicable)
- Appendices (if applicable) (Enter appendix titles in the table of contents manually)
- Attachments (if applicable) (Enter attachment titles in the table of contents manually)

Generate the table of contents using Microsoft Word’s automated feature. To do so, go to Insert → Reference → Index and Tables → Table of Contents → OK. Add at least two levels of heads (or more) under the table of contents to help the reader know the contents of the chapters.

For the preface and abstract, it may be necessary to enter a few periods before the page number so that the dot leader works properly. Note that appendix and attachment listings must be entered by hand. Do not provide page numbers for appendices or attachments.

Following the table of contents, generate the list of figures and the list of tables, if needed, using Word’s automated features. To do so, go to Insert → Reference → Index and Tables → Table of Figures. Under “Caption Label” choose either Figure or Table, then in Options, Style, choose “Figure caption” (for a figure) or “Table caption” (for a table) → OK.

Update the table of contents, list of figures, and list of tables after all editing has been completed, and proofread to ensure that the entries are complete and correct. (Microsoft’s automatic table of contents feature, while very useful, is not perfect and can occasionally miscreate entries.)

Abstract

All Energy Commission reports are required to have a short abstract. This concise, informative summary of the report is geared toward a more technical audience and should be less than 200 words—about a half page, single spaced. (You can use “Word Count” in the “Tools” menu of Microsoft Word to check the number of words.)

The abstract should address the report’s purpose, scope, methods, and major findings, including the report’s results, conclusions, and recommendations. Abstracting services publish abstracts to help readers determine whether a report is targeted to their area of interest; therefore, it should be understandable as a stand-alone document. The abstract should not contain undefined symbols, abbreviations, or acronyms, and should not refer to specific numbered elements of the main report. It should not refer to other research literature unless it is essential to clarify the document’s purpose. If the report is a supporting document to another report, that information should be noted. Do not, however, include citations in the abstract.

The abstract **must** contain 5–20 **keywords** that will help search engines and other databases track the report’s subject matter. The keywords should be listed separately four lines below the abstract. Separate each word by commas with no ending punctuation. For example:

Keywords: Solar, photovoltaic, PV cells, PV panels, building-integrated PV, BIPV, electricity production, distributed generation

Executive Summary

The executive summary is a final report in miniature, containing all the key information. It summarizes the report and should include the following headings:

- Introduction
- Purpose (outlining the broad purpose)
- Project Objectives (those that are measurable and foreseeable)
- Project Outcomes (this section may be missing from an interim report)
- Conclusions (this section may be missing from an interim report)
- Recommendations (this section may be missing from an interim report)
- Benefits to California

These headings will not appear in the table of contents. They do not take a numbered heading.

The executive summary is intended to be short (preferred length is 2–3 pages). It can use a succinct, bulleted format to summarize the pertinent points under each of these sections, or can be more conversational (but still succinct). Assume a non-technical, management-level readership. If your report covers more than one project, repeat this organization for each project area.

As a report summary, the executive summary should not present new information that is not found in the main document, and the executive summary should not repeat the abstract.

Do not cite references in the executive summary.

The executive summary marks the division between front matter, with lowercase roman numeral pagination, and the body of the report. Thus, the first page of the executive summary will always be page 1 (arabic) of the report.

Introduction

The introduction summarizes the purpose of the project and puts the need for the research into context. The following outline is a suggestion, but not mandatory.

Background and Overview—Provide relevant background. Define (at an intelligent layperson’s level) the problem being addressed by the project. Identify the project’s subject area and research goals. Refer to the contract for this information.

Project Objectives—Present the technical and economic objectives for your project. The objectives need to express how to measure or know whether or not the objectives have been achieved. This information should be taken from the contract and should reflect any changes made during the course of the project. (Describe why these changes were made in the project approach section.)

Each objective shall be separately identified. A useful form is to use an action verb followed by relevant text, for example:

Project objectives were to:

- Verify...
- Determine...
- Measure...

Report Organization—Very long or complicated reports may benefit from a paragraph outlining the report’s organization. For most reports, this is not necessary.

Project Approach (or Methods)

This section discusses the tasks you undertook and what you did to accomplish your objectives. Discuss the testing procedures you undertook and any system modifications and improvements you made.

Note that the Energy Commission does not permit the use of first person in PIER reports. Thus, instead of “We tested X” you must write “The research team tested X” or “The project tested X.”

Project Outcomes (or Results)

This section presents your results. Please organize them in the same order as the objectives. An easily readable style is to state a brief version of each outcome in bulleted form and then follow each bullet with supporting paragraphs that describe each outcome, although any well-organized presentation will be accepted.

There can be more outcomes than there were objectives, because there may be more than one outcome per objective, or you may have found an unanticipated outcome during your research. However, you cannot have stranded objectives; all objectives, whether met or not, must be

discussed in this section. If this section is particularly long, you may wish to summarize the outcomes at the end of the section.

Conclusions and Recommendations

Conclusions—Conclusions must be drawn from evidence presented in the report, and there must be a conclusion for every objective presented earlier. Present your conclusions either in priority order or in the same order as the objectives presented earlier. You may have conclusions that are broader than individual objectives and outcomes. If so, please present these separately from the individual conclusions.

Commercialization Potential—If your project had a task to prepare a Production Readiness Plan or a similar effort to assess where the research stands in relationship to being used in its relevant markets, please discuss that task in this section.

Recommendations—Specific recommendations for future research should derive from the conclusions presented and should be presented in the same priority order as those conclusions. Specific recommendations could broadly describe the research initiative(s), provide a rationale, and include an estimate of the funding level required; it is acceptable to provide an estimate as a range (low to high dollar amount). Also, include an estimate of the time required to carry out the recommended next steps. For example, would this be a multi-year study requiring three to five years, or would this be a scoping study that could be completed in a year? Please be succinct. General recommendations should follow. Please do not add specifics on the time and cost of follow-on activities in the executive summary.

Benefits to California—Discuss these two issues in this section:

- The benefits that California has already received from this contract (if applicable).
- How California will or could benefit from the results of this project. These benefits need to be related to the problems that this research was intended to address; however, discussion of ancillary benefits is also encouraged. Refer to the executive summary section of the report—the list of benefits in both sections should be identical.

References

The references must list all documents cited in the body of the report. List references in a standard alphabetical format. Use PIER's Normal font (Palatino Linotype, 11 point). Please check that all of the references contained in the body of the report are accurate and that the full citation for each reference is listed in the references section.

For formatting of references, consult the following books:

Sabin, William A. *The Gregg Reference Manual (10th Edition)*. McGraw-Hill Irwin, 2005. ISBN: 0072936533.

Style Manual Committee, Council of Science Editors. *Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers (7th Edition)*. University of Cambridge, 2006. ISBN: 097796650X.

University of Chicago Press. *The Chicago Manual of Style (15th Edition)*. University of Chicago Press, 2003. ISBN: 0226104036.

Any documents referred to in the appendices should be listed in a reference section in that appendix; that is, each appendix carries its own references section.

Glossary

If the report uses more than 10 acronyms, please provide a glossary with definitions for each acronym. Use Microsoft Word's table feature to create a two-column format.

Bibliography

A bibliography includes references that were used in preparation of the report, but are not cited in the report. This section is optional. If used, consult the same reference books mentioned in the references section, above, for formatting guidance.

Appendices

An appendix is supplementary material that is produced by the report's author(s).

The body of the report needs to refer clearly to the attached appendices. References to multi-page appendices need to be specific to the specific page or section of the appendix, not just a general reference to "Appendix D." The report should also explain how the material in the appendices matters to the text. If it does not really matter, the appendix probably should be dropped. (You may still need it because it is a deliverable according to your contract, grant, or work authorization agreement, so check this carefully.)

Designate appendices by capital letters (Appendix A, Appendix B, Appendix C, etc.), not numbers.

If a document's file size with appendices is large (more than 5.0 megabytes), the appendices are published by the Energy Commission as separate documents from the main report. All appendices must be either part of the main document or presented as separate PDF files. Appendices that are separate volumes are given their own publication numbers, covers, and credits pages. See Chapter 6 for more details.

If the appendix has been previously published by another organization or agency with a different cover, it receives a PIER cover page but no credits page.

Further, if the appendix has been previously published by another organization or agency, you must provide written permission from the original publisher for the Energy Commission to post the material on the Energy Commission website indefinitely. See Chapter 6 for details.

Attachments

An attachment is supplementary material produced by someone other than the report's author(s). To attach this material, you must provide written permission from the original publisher for the Energy Commission to post the material on the Energy Commission website indefinitely.

If attachments are required, they are designated by roman numerals (e.g., Attachment I, Attachment II). See Chapter 6 for more details.

6.0 Formatting PIER Project Reports

Format Styles

Contractors must use the PIER project report typographic styles described in these guidelines. They are summarized in Chapter 7, Formatting Style Matrix for PIER Project Reports. These styles—and boilerplate cover and credits pages—are provided on the Energy Commission’s website:

- ❑ Main PIER Report Styles
- ❑ PIER Cover Page Template
- ❑ PIER Credits Page Template

You can also access these items from the main PIER contractors information page at:

www.energy.ca.gov/contracts/pier/contractors

To use the PIER styles template, simply copy it as a .doc file and insert your report document at the end (and delete the template text). If that doesn’t work, try the following procedure:

1. Download the Style Template from the link above.
2. Open the template.
3. Save it as a template (.dot) document.
4. Copy the entire report at the end of the template (where the 0 PIER Normal font paragraph mark appears on the second page of the template file).
5. Delete the template text.

As you format your report, be sure to apply the exact “0 PIER” styles listed in the template. For example, 0 PIER Normal is not the same as Normal.

Blank Pages

Blank pages should be inserted after the cover page, the credits page, and before each section if necessary for the new section to start on the right-hand side of the report when bound as a book. The one exception is when there is no acknowledgments page; in that case, if the citation will not fit on the preface page, the citation should be inserted at the bottom of the otherwise blank page following the credits page. Number all blank pages from the acknowledgments page onward.

Pagination

Use Palatino Linotype 10 pt. for page numbers, centered at the bottom of each page.

Pagination begins on the acknowledgments and citation page (as i, ii, iii..) and continues in lowercase roman numerals through the preface, table of contents, and the abstract. The cover and credits pages are not numbered. Number the blank pages but do not put “This Page Intentionally Left Blank” on blank pages.

On the first page of the executive summary, begin numbering “1” and continue sequential numbering throughout the document. See the Appendices and Attachments discussion for page numbering of those sections.

Page Breaks

If a subheading is at the bottom of the page, but the text jumps to the next page, put a page break before the subheading. Font metrics may be slightly different depending on the computer operating system. Including a page break will ensure that headings are not left alone at the bottom of a page with no content.

Figures and Tables

Figures and tables can use any style that presents the information clearly and is readable. Chapter 7 provides guidance for the typography of table cells and column heads.

Captions must use the 0 PIER styles specified in the formatting matrix in Chapter 7. Note that captions should be separate from the figure or table itself, not embedded in the graphic file.

The list of figures and list of tables should be automatically generated in a manner similar to the table of contents. If figure or table captions are particularly long, hand-edit them in the list of figures/list of tables as you see fit.

Remember to submit original graphics files with your report.

Footnotes

Only footnotes (not endnotes) should be used in PIER project reports. They should be used sparingly to briefly clarify terms or concepts that may not be understood by the average reader. Footnotes are placed at the bottom of the page on which they appear.¹ Do not place footnotes at the end of a section. Insert footnotes using Microsoft Word’s footnote feature: Insert → Reference → Footnote.² Footnote numbering should automatically readjust as footnotes are added or deleted.³ Footnotes should be entered *after* periods or commas.

1. The footnote number appears in the text as a superscript. The associated footnote appears below in the footnote section at the bottom of the page.

2. Microsoft Word will automatically superscript the footnote number at the bottom of the page. Because this is so small, please unscript it—that is, apply the 0 PIER Footnote Text style to the number, as shown in these examples. Add a period after the number.

Use 0 PIER Footnote Text style for the footnote itself. Do not add an extra space between footnotes; the spacing is built into the style.

3. Reviewers using Microsoft’s Track Changes feature will observe that footnote numbering may remain out of sequence until all tracked changes have been accepted.

Table of Contents

The table of contents should be generated automatically using Microsoft Word's Insert → Reference → Index and Tables feature. (Any appendices or attachments must be added manually.) The table of contents is based on the style headings assigned to each section. The table of contents should be checked to make sure it has been updated correctly after each series of edits. Checking that chapters and headings agree with the page numbering should be the last task before creating the Adobe Acrobat PDF.

Appendices and Attachments

An appendix is supplementary material that is produced by the report's author(s). An attachment is supplementary material that is produced by someone other than the author(s).

Copyright and Permissions

If the document has been previously published, the researcher/contractor must obtain written permission from the copyright holder before it can be republished by the Energy Commission. You should ask for "written permission for electronic publishing of the document in Adobe Acrobat PDF format on the California Energy Commission's website." Make sure there is no time limit on the permission—that is, ensure that the file may be posted on the Energy Commission's website indefinitely.

Send a photocopy of the written permission to your PIER contract, grant, or work authorization manager when you deliver the report and the appendix(es) or attachment(s).

All previously published documents will be posted as separate files, with their own cover pages. No credits page is needed for appendices or attachments not funded by PIER. On the cover page where the words "Prepared By" are located, please include the following statement verbatim:

This document is an attachment to a report funded by the California Energy Commission's Public Interest Energy Research (PIER) Program. The PIER Program did not fund this document, but the author(s) of the PIER-funded report has/have attached it as a supporting document.

The California Energy Commission wishes to thank the copyright holder, [**fill in name of author and/or publisher or whoever holds copyright**], for permission to republish this document in electronic format on the Energy Commission's website.

Please contact this document's author/publisher for additional information about the document.

Appearance in Table of Contents

When preparing the table of contents for the report, you need to manually enter each appendix letter and title (or attachment number and title) into the table of contents. Do not enter the appendix/attachment page numbers.

Preparing Appendices

Appendices should use the same Energy Commission–required format and style as the main report. If an appendix was previously published using a different style and format, that

organization's or agency's style and format does not necessarily need to be changed. Appendices are sometimes edited or reformatted by the Energy Commission, but not always, so ensure that the material is accurate and clear.

Appendices are typically included at the end of the main report. However, they are posted as separate documents if (1) their inclusion in the final report creates a file that is larger than five megabytes or (2) the work was not funded by PIER and thus requires copyright permission for publication. Short appendices may be combined into one volume.

Appendices as Part of the Main Report

The first page of each appendix should be a title page, containing the following information:

- Appendix A (or B or C, etc.), assigned a 0 PIER Centered Title style.
- Title of appendix, assigned a 0 PIER Centered Title style.
- APA-1 (or APB-1, APC-1, etc.), page numbering centered on the bottom of the page.

This title page should be followed by a blank, unnumbered page (which forms the back side of the title page when printing double sided). The content of the appendix will thus begin on a right-hand page. Paginate the content of the appendix with arabic numerals (1, 2, 3, etc.).

Appendices as Documents Separate from the Main Report

Where the appendix would normally go in the main report, insert a "slip sheet" that lists the following information:

- Appendix A (or B or C, etc.), assigned a 0 PIER Centered Title style.
- Title of appendix, assigned a 0 PIER Centered Title style.
- Text on the slip sheet saying: "This appendix is available in a separate volume, CEC-500-YEAR-XXX-APX." That is, provide the publication number of the appendix on the slip sheet (see discussion of publication numbers, below).

The slip sheet has no page number.

If there is more than one appendix, the titles of each appendix may be listed on a single slip sheet. The title of the page, in that case, should be "Appendices" (0 PIER Centered Title) with the appendix letters and titles, and their publication number(s), neatly arranged as a list.

If you have multiple small appendices, they may be combined into a single volume if the file size permits. If the multiple appendices create a file larger than five megabytes, then separate volumes should be created for each appendix. Appendices are posted online in Adobe Acrobat PDF format.

Each separate appendix file must have its own PIER cover page and publication number. If the work was funded by PIER, each separate appendix must also have a PIER credits page. The publication number for each appendix is provided by the Energy Commission. The number consists of the report's publication number (CEC-500-YEAR-XXX) plus the suffix -APA, -APB, -APC, etc., depending on the letter of the appendix. Therefore, the publication number for Appendix B of a report could read like: CEC-500-2006-972-APB.

If the work in the appendix was not funded by PIER, be sure the cover page contains the boilerplate copyright permission language provided earlier in this chapter under Copyrights and Permissions.

Preparing Attachments

Attachments are designated with roman numerals rather than letters (Attachment I, Attachment II, etc.).

Attachments are published separately from the main report. Prepare a single slip sheet and cover page(s) the same way as for appendices. The Energy Commission will assign a publication number to each attachment.

In most cases, attachments will require permission to publish from the copyright holder. It is the report author's responsibility to obtain this permission; be sure to include the boilerplate permission language on the cover page.

Please note that this page is normally left blank and is the back side of the final odd page of Chapter 6. It is inserted so Chapter 7 will begin on an odd-numbered page. Usually no information is included on this page, nor is there text that says "this page left intentionally blank." This blank page must be included for the report to print two-sided pages properly.

7.0 Formatting Style Matrix for PIER Project Reports

Applies To	Style Name	Style Definition
<p>Normal</p> <p>All “regular” text that is not assigned a special style (e.g., heading, bullet, caption)</p>	<p>0 PIER Normal</p>	<p>PIER standard is Palatino Linotype 11 pt., align left, line spacing at least 14 pt., 0 pt. before paragraph, 8 pt. after paragraph. Palatino Linotype is used because of its readability due to its larger “x” height and “m” width.</p> <p>Palatino Linotype (11 pt.) The quick, fast fox jumped over the lazy brown dog.</p> <p>If Palatino Linotype is not available, please use the same line spacing with one of the following typefaces:</p> <p>Century Schoolbook (11 pt.) The quick, fast fox jumped over the lazy brown dog.</p> <p>Times New Roman (use 12 pt.) The quick, fast fox jumped over the lazy brown dog.</p> <p>Text is align left (ragged right), not fully justified.</p> <p>No paragraph indentation.</p>
<p>Appendix Text</p>	<p>0 PIER Normal</p>	<p>Uses same styles and formatting as main report.</p>
<p>Attachments</p>		<p>PIER does not edit attachments or require its formatting to be used.</p>
<p>Bullets</p>	<p>0 PIER Bullet</p>	<p>Palatino Linotype, 11 pt., 0 pt. before and 4 pt. after item, at least 14 pt. line spacing.</p> <p>Bullet should be indented 0.25" from left. Text should have a hanging indent of 0.25" (so it is set at 0.5" from the left).</p> <ul style="list-style-type: none"> • Bullet item number 1. • Bullet item number 2. <ul style="list-style-type: none"> ○ Bullet item number a. ○ Bullet item number b. • Bullet item number 3. <p>Second-level bullets are indented 0.5" with a hanging indent of 0.25".</p>

Applies To	Style Name	Style Definition
Bullets, cont.		<p>1. As shown here, if items are numbered, apply the “0 PIER Bullet” style first, then click on the numbered list button on the formatting menu bar, which will change the bullets to numbers.</p> <p>The list may be followed by a return, placing space between it and following text (use your judgment as to what looks best for a given list).</p>
Captions for Figures (Graphs, Charts, Drawings, Photographs)	0 PIER Figure Caption	<p>Arial, 10 pt., bold, 3 pt. before and after.</p> <p>Brief captions are preferred; however, some graphics may require a lengthier caption. If so, you may use a smaller caption font (8–10 pt.) at your discretion. Typically, captions should not introduce new information.</p> <p>Captions for photographs should include an 8 pt. photo credit with the individual’s or company’s name.</p> <p>Figures can be numbered in chapter-number format (e.g., Figure 2-1, Figure 2-2, etc.) or numbered sequentially through the entire report (e.g., Figure 1, Figure 2, etc.). Use the same numbering style for any tables.</p> <p>Figures are labeled: Figure #. Title of figure in sentence case (there is no period at the end of the caption unless it is a complete sentence)</p> <p>The figure itself should be centered on the page. Align the caption under the left edge of the figure, as shown:</p>  <p>Figure 3-1. Building-integrated solar roofing used in a solar car port. UNI-SOLAR metal roofing in the project is by Solar Utility of Culver City, California. Photo Credit: United Solar Systems Corporation</p>

Applies To	Style Name	Style Definition
Captions for Tables	0 PIER Table Caption	<p>Arial, 10 pt., bold, 3 pt. before and after.</p> <p>Center the table; align caption with left edge of table.</p> <p>Tables are labeled: Table #. Title of table in sentence case (there is no period at the end of the caption unless it is a complete sentence)</p> <p>Tables can be numbered in a chapter-number format (e.g., Table 2-1, Table 2-2, etc.) or numbered sequentially through the entire report (e.g., Table 1, Table 2, etc.). Use the same style for numbering figures.</p> <p>Avoid the use of text boxes wherever possible and insert the tables directly into the document.</p> <p>Every table presented must be referred to in the text.</p>
Equations		<p>Equations are centered on a new line.</p> <p>Avoid the use of Microsoft Word text boxes wherever possible and insert the equations directly into the document.</p> <p>Every equation presented must be referred to in the text.</p> <p>If special characters are used to create the equation, make sure typefaces are supported and available across various computer operating systems or platforms.</p> <p>Occasionally, special characters may not be available in a standard typeface. It would be better to create the equation as a graphic in TIF or JPG format and insert it into the text as a graphic file.</p>
Figures (Graphs, Charts, Drawings, Photographs)		<p>Figures should be centered. Align captions with left edge of figure.</p> <p>Avoid the use of Word text boxes wherever possible and insert the figures directly into the document.</p> <p>Every figure presented must be referred to in the text.</p> <p>If the figure is a graphic, picture or photograph, it should be at least 300 dots per inch (dpi). Do not use low-resolution Internet pictures (72 to 96 dpi).</p>
Footnotes	0 PIER Footnote Text	<p>Footnote style is Palatino Linotype, 10 pt., 0 pt. before and 6 pt. after. The footnote reference number should be superscript in the text but not in the footnote itself.</p>

Applies To	Style Name	Style Definition
Graphs		<p>It is not necessary to title a graph while it is being created in the graph-creating software (such as Microsoft Excel) because the graph title is supplied by the caption.</p> <p>Please label all axes.</p> <p>Use sentence case.</p> <p>Include units.</p>
Glossary		<p>Please use table format with word or acronym on the left side and the definition on the right side. Do not show gridlines. Do not use tabs or spaces to “create” the table, but use the table function in Microsoft Word.</p> <p>Both columns are align left; column width is flexible depending on the width of the largest word.</p>
Chapter Headings (Level 1)	1.0 0 PIER Head 1	<p>PIER style is Arial, bold, 16 pt.</p> <p>Left aligned, 0 pt. before, 6 after.</p> <p>Headings are in title case.</p> <p>Headings are outline numbered, with tab stop 0.5".</p> <p>Head shows as 1.0, without a final period, in contrast to lower-level heads which use a final period; this is an artifact of Microsoft Word.</p> <p>If the first element of the chapter is a sub-head (level 2 head), do not use a carriage return before the sub-head. If the first element of the chapter is regular text, use a carriage return (0 PIER Normal) between the chapter head and the first paragraph.</p>
Sub-Headings (Level 2)	1.1. 0 PIER Head 2	<p>PIER style is Arial, bold, 14 pt.</p> <p>Left aligned, 12 pt. before, 3 after.</p> <p>Headings are in title case.</p> <p>Headings are outline numbered, tab stop 0.5".</p> <p>Head shows as 1.1.</p> <p>There is no additional carriage return before the next paragraph or heading.</p>

Applies To	Style Name	Style Definition
Sub-Sub-Headings (Level 3)	1.1.1. 0 PIER Head 3	PIER style is Arial, bold italic, 12 pt. Left aligned, 6 pt. before, 3 after. Headings are in title case. Headings are outline numbered, tab stop 0.5". Head shows as 1.1.1. There is no additional carriage return before the next paragraph or heading.
Sub-Sub-Sub-Headings (Level 4)	0 PIER Head 4	PIER style is Arial, bold italic, 11 pt. Left aligned, 6 pt. before, 3 after. Headings are in title case. There is no outline number for Level 4 heads. There is no additional carriage return before the next paragraph or heading.
Page Numbers		Begin numbering "i" on the acknowledgments/citation page. On the first page of the executive summary, begin numbering "1". Use Palatino Linotype, 10 pt. Centered, bottom. See the appendix and attachments sections of this document for pagination of those sections.
References		Use 0 PIER Normal style but with a 0.5" hanging indent.
Table Column Headings	0 PIER Table Heading	Arial, bold, 9 to 10 pt. First column heading is align left; all other column headings are centered. Row headings are align top. Use sentence case.
Table Data Cells	0 PIER Table Cell	Arial, 8 to 10 pt. depending on amount of text. Be consistent throughout entire table.

Applies To	Style Name	Style Definition
Table of Contents	0 PIER Normal for text; 0 PIER Centered Title for title	Chapter number is aligned at left margin with hanging indent of 0.5". Preferably, section numbers are tabbed at 0.5" from the line above with hanging indent at 0.5". Page numbers are set with tab right at 6.5", with a dot leader. Page numbers are all aligned right.
Titles: Centered Title Headings	0 PIER Centered Title	Arial, 14 pt., bold, 0 pt. before, 20 after. Centered, title case. This style applies to title headings not a part of the body of the paper (Acknowledgments, Table of Contents, List of Figures, and List of Tables). These heads do not show in the table of contents. There is no additional carriage return before the next paragraph or heading.
Titles: Centered TOC Headings	0 PIER Centered TOC	Arial, 14 pt., bold, 0 pt. before, 20 after. Centered, title case. This style applies to title headings (such as Preface, Abstract, and Executive Summary) that do show in the table of contents. There is no additional carriage return before the next paragraph or heading.

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Most companies use the Microsoft Office suite of software programs for word processing, spreadsheets, and presentations. The Energy Commission requests that report files be compatible with Microsoft products. This request, however, does not mean that the Energy Commission or the State of California endorse these products. Other word processing software programs may be used as long as the saved files are compatible with Microsoft Word XP (2002).

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The properties of the file should be filled out. Go to File → Properties menu and complete the information in the Summary portion. These include:

- Title
- Subject
- Author
- Manager
- Company
- Category (optional)
- Keywords
- Comments (optional)

Graphic Files and Photographs

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Label graphic file names so they correspond with their figure title in the report. For example, if you have a photograph used as Figure 23, label the file name as figure_23.jpg.

Use underscores (_) between words in file names instead of spaces. Do not use the following characters in a file name: ! @ # \$ % ^ & * () ; : { } [] / \ |

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