

**ENERGY FACILITY SITE EVALUATION COUNCIL
STATE OF WASHINGTON**

In the Matter of Application)	Application No.: 2006-01
No. 2006-01:)	
)	
ENERGY NORTHWEST)	OPENING BRIEF OF
)	COLUMBIA RIVERKEEPER,
PACIFIC MOUNTAIN)	ROSEMERE NEIGHBORHOOD
ENERGY CENTER)	ASS'N, AND WILLAPA HILLS
-----)	AUDUBON SOCIETY

Submitted by:

Brett VandenHeuvel
Staff Attorney
Columbia Riverkeeper
917 SW Oak, Suite 414
Portland, OR 97205
(503) 224-3240
bv@columbiariverkeeper.org

1 **INTRODUCTION**

2 Columbia Riverkeeper, Rosemere Neighborhood Association, and Willapa Hills
3 Audubon Society (hereinafter Riverkeeper) respectfully submit the following brief in
4 response to the Energy Facility Site Evaluation Council’s September 20, 2007, questions.
5 For the reasons discussed herein, the Greenhouse Gas Reduction Plan (GGRP) developed
6 by Energy Northwest (Energy NW) for the Pacific Mountain Energy Center (PMEC) is
7 legally insufficient. Washington’s new climate change law requires that applicants submit
8 a legally supportable carbon sequestration plan before constructing a new baseload power
9 plant. Energy NW’s attempt to receive a site certification without developing a specific
10 and legally supportable plan for sequestering its carbon dioxide emissions must fail.
11 EFSEC must reject the GGRP and require that Energy NW submit a legally adequate plan
12 before the adjudicative process can proceed.
13
14

15 **FACTUAL BACKGROUND**

16 On September 12, 2006, Energy NW submitted an application to the Energy
17 Facility Site Evaluation Council (EFSEC) for a site certification agreement to construct
18 and operate a 600 Megawatt (MW) coal or petcoke-fired integrated gasification combined
19 cycle (IGCC) power plant known as the Pacific Mountain Energy Center (PMEC). Energy
20 NW stated that it would retain ownership of 50% of the gasification equipment and one of
21 two proposed 300 MW combustion turbine power plants. The other 50% of the
22 gasification equipment and proposed 300 MW power plant would be owned by the Pacific
23 Mountain Energy Group, LLC, a corporation owned primarily by investors. On October
24 20, 2006, EFSEC initiated the site certification agreement review process by issuing a
25 Determination of Significance and public notice for an Environmental Impact Statement
26 (EIS) scoping process pursuant to the State Environmental Policy Act (SEPA).
27
28

1 On May 8, 2007, Energy NW requested a delay in the start of the adjudicatory
2 process due to the May 3, 2007 approval of Senate Bill 6001, codified as Chapter 80.80
3 Revised Code of Washington (RCW), which is Washington's Climate Change Mitigation
4 law. On July 2, 2007, Energy NW requested that EFSEC start the adjudicatory process.
5 On July 30, Energy NW submitted a "Greenhouse Gas Reduction Plan" (GGRP) in an
6 effort to comply with Chapter 80.80 RCW's requirement for a "carbon sequestration plan."

7
8 On August 13, 2007, EFSEC issued an Order Commencing Adjudicative
9 Proceeding under Chapter 34.05 RCW and Title 463 of the Washington Administrative
10 Code (WAC). In its August 13, 2007, Order, EFSEC established a Closing Date for
11 Submitting Petitions for Intervention of September 13, 2007, and scheduled a prehearing
12 conference for September 20, 2007. On or before September 13, 2007, several parties
13 moved for intervention, including Riverkeeper. At the September 20, 2007, prehearing
14 conference, EFSEC granted intervenor status to the moving parties and presented all
15 parties with a list of questions to answer about Chapter 80.80 RCW, along with orders on a
16 number of other procedural issues. Council Order No. 832 (September 26, 2007).

17 **LEGAL BACKGROUND**

18
19 Earlier this year, the Washington legislature and Governor Gregoire endeavored to
20 encourage a clean and affordable energy future for Washington by imposing greenhouse
21 gas prevention through Engrossed Substitute Senate Bill 6001, now codified as Chapter
22 80.80 RCW. The Climate Change Law establishes a greenhouse gases emissions
23 performance standard for baseload electric generation plants for which electric utilities
24 enter into long-term financial commitments on or after July 1, 2008, or which commence
25 operation after June 30, 2008. RCW § 80.80.040(1) & (2). The greenhouse gases
26
27
28

1 emissions performance standard is the lower of: 1100 pounds of greenhouse gas per
2 megawatt hour (lbs/MWh); or the “average available greenhouse gases emissions output”
3 established by rule by the Department of Community, Trade, and Economic Development
4 (CTED) after a review of new combined-cycle natural gas thermal electric generation
5 turbines. RCW §§ 80.80.040(1)(a) & (b); 80.80.050. CTED is required to review new
6 commercially available turbines and adopt an “average available greenhouse gases
7 emissions output” every five years. RCW § 80.80.050. In this way, the Climate Change
8 Law ensures technological development and decreasing greenhouse gas emissions from
9 power plants over time.¹ The greenhouse gases emissions standard does not apply solely
10 to carbon dioxide emissions. Rather, greenhouse gas emissions that will be considered in
11 determining compliance with this standard include carbon dioxide, methane, nitrous oxide,
12 hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. RCW § 80.80.010(14).

13
14
15
16 The Climate Change Law includes several options for baseload electric generation
17 plants to comply with the greenhouse gases emissions performance standard. First, all
18 electric generation facilities powered exclusively by renewables are deemed in compliance.
19 RCW § 80.80.040(3). Similarly, all cogeneration plants fueled by natural gas or waste gas
20 are deemed in compliance. RCW § 80.80.040(4). For baseload generation plants that do
21 not fall into those two categories, the total emissions associated with producing electricity
22 must not exceed the greenhouse gases performance standard. RCW § 80.80.040(5).

23
24 Certain categories of greenhouse gases will not be included for purposes of calculating
25

26
27
28 ¹ Energy NW’s assumption that PMEC will not be required to meet a greenhouse gases
emissions performance standard lower than 1,100 lbs/MWh under the Climate Change
Law is therefore incorrect. *See* GGRP at 7, Section III(1). Riverkeeper herein incorporates
the argument of Northwest Energy Coalition, Washington Environmental Council and
Sierra Club in their Opening Brief on this point.

1 “the total emissions associated with producing electricity,” certain categories of
2 greenhouse gases. These include: (a) emissions permanently injected into geological
3 formations; (b) emissions permanently sequestered by other means approved by the
4 Department of Ecology (Ecology); and (c) emissions “sequestered or mitigated as
5 approved under subsection (13) of this section.” RCW § 80.80.040(7).

7 Subsection (13) of Section 80.80.040 provides that a project under consideration by
8 EFSEC by July 22, 2007, must submit a carbon sequestration plan as part of the EFSEC
9 process. RCW § 80.80.040(13). The required carbon sequestration plan must “include all
10 of the requirements of subsection (11) of this section.” Subsection (11) of Section
11 80.80.040 instructs EFSEC and Ecology to include certain criteria for evaluating carbon
12 sequestration plans in the rules that those agencies are required to promulgate pursuant to
13 subsection (10) of Section 80.80.040. These include:

- 16 (a) Provisions for financial assurances, as a condition of plant operation,
17 sufficient to ensure successful implementation of the carbon
18 sequestration plan, including construction and operation of necessary
19 equipment, and any other significant costs;
- 20 (b) Provisions for geological or other approved sequestration commencing
21 within five years of plant operation, including full and sufficient
22 technical documentation to support the planned sequestration;
- 23 (c) Provisions for monitoring the effectiveness of the implementation plan;
- 24 (d) Penalties for failure to achieve implementation of the plan on schedule;
- 25 (e) Provisions for an owner to purchase emissions reductions in the event of
26 the failure of a sequestration plan under subsection (13) of this section;
27 and
- 28 (f) Provisions for public notice and comment on the carbon sequestration
plan.

RCW § 80.80.040(11)(emphasis added). If the submitted carbon sequestration plan
satisfies these six criteria and is accepted by EFSEC, the project proceeds in the usual way
to final site certification agreement. Once the project receives a final site certification
agreement, the project owner must make a “good faith effort to implement the

1 sequestration plan.” Thereafter, if the project owner can demonstrate through evidence
2 before EFSEC that technological and economic barriers preclude successful
3 implementation of the sequestration plan, the project owner must implement the provisions
4 of its plan under subsection (11)(e) for the purchase of emissions reductions. RCW §
5 80.80.040(13). This includes the purchase of “verifiable greenhouse gases emissions
6 reductions from an electric generating facility located within the western interconnection.”
7 *Id.* These reductions must be reductions that would not have occurred otherwise or absent
8 the contractual agreement between the project owner and the target plant. *Id.* The sum of
9 these emissions reductions and the emissions from the project must meet “the standard for
10 the life of the facility.” *Id.*

13 In addition to the Climate Change Law, Chapter 80.70 RCW (hereinafter Carbon
14 Mitigation Law) requires fossil fuel-fired electric generation facility to mitigate 20% of its
15 lifetime carbon dioxide emissions. The Carbon Mitigation Law requires an applicant
16 proposing a fossil fuel-fired electric generating facility larger than 350 MW to provide a
17 “carbon dioxide mitigation plan.” RCW § 80.70.020(2)(a). The mitigation plan must be
18 included in the site certification agreement proposed to the governor and in the final site
19 certification agreement. RCW § 80.70.020(2)(a). The “carbon dioxide mitigation plan”
20 must include one or more of three carbon dioxide mitigation options in its mitigation plan.
21 RCW § 80.70.020(3). These include: payment to a third party to provide mitigation (at a
22 cost of \$1.60 per metric ton); direct purchase of carbon credits; and investment in the
23 applicant’s own carbon dioxide mitigation projects, including cogeneration. RCW §
24 80.70.020(3)(a)-(c). The carbon dioxide mitigated through these methods, as specified in
25
26
27
28

1 the applicant’s “carbon dioxide mitigation plan,” must equal 20% of the “total carbon
2 dioxide emissions produced by the facility.” RCW § 80.70.020(4).

3 **ARGUMENT**

4 **I. Rulemaking²**

5 **I.a. These Proceedings Must be Stayed Until the Department of Ecology
6 and EFSEC Complete Rulemaking Under the Climate Change Law.**

7 Rules are necessary as both a legal and practical matter before EFSEC can
8 undertake an appropriate review of the substance of any “carbon sequestration plan.”

9 These proceedings must be stayed because the statute requires that any pending
10 applications be considered under the rules that Ecology and EFSEC promulgate to
11 implement RCW § 80.80.040(11). Additionally, review of the GGRP before rules are
12 promulgated makes little sense as a practical matter.
13

14
15 First, the law requires that any carbon sequestration plan be evaluated pursuant to
16 EFSEC and Ecology rules. By June 30, 2008 EFSEC and Ecology must adopt rules
17 necessary to implement the greenhouse gases emissions standard. RCW § 80.80.040(10).
18 The statute provides a list of provisions that must be included in the rules, but clearly notes
19 that the rules “shall include but not be limited to” those provisions. RCW § 80.80.040(11).
20 These required rules must include “criteria to be applied in evaluating the carbon
21 sequestration plan, for baseload electric generation that will rely on subsection (7) of this
22 section to demonstrate compliance, but that will commence sequestration after the date that
23 electricity is first produced.” RCW § 80.80.040(11).³
24
25

26
27 ² For ease of EFSEC's review, Riverkeeper has organized this brief to correspond to the
28 numbering and sequence of the questions presented to the parties on September 20, 2007.
³ “Baseload electric generation that will rely on subsection (7)” for compliance with the
greenhouse gases emissions performance standard are baseload electric generation plants

1 PMEC qualifies as a facility “relying on subsection (7)” because PMEC will emit
2 in excess of 1100 lbs/MWh of greenhouse gases when operating as proposed.⁴ Therefore,
3 Energy NW must submit a carbon sequestration plan, and that plan must be evaluated by
4 EFSEC with reference to the “criteria to be applied in evaluating the carbon sequestration
5 plan” under RCW § 80.80.040(11).⁵ Because these criteria must be developed through
6 rules promulgated by EFSEC and Ecology, evaluation of the carbon sequestration plan
7 before those criteria have been established and clarified ignores the structure of the statute.
8 The statute requires EFSEC to evaluate a sequestration plan using criteria both enumerated
9 in the statute and developed by EFSEC and Ecology through a rulemaking process. RCW
10 § 80.80.040(11).

13 Second, limiting review of the carbon sequestration plan to the criteria in
14 subsection (11) will prematurely limit EFSEC’s review as a practical matter. The rules
15 that EFSEC and Ecology will develop to implement the carbon sequestration plan
16

17 that are not: existing cogeneration facilities firing natural gas or waste gas; electric
18 generation facilities or power plants powered exclusively by renewable resources; or
19 baseload electric generation plants that have total emissions of greenhouse gases associated
20 with producing electricity of less than 1100 lbs/MWh. *See* RCW § 80.80.040(3)-(5). If a
21 baseload electric generation plant does not qualify as one of the two enumerated source
22 types deemed compliant, and the plant, as proposed, will emit greenhouse gases from
23 producing electricity in excess of 1100 lbs/MWh, that plant is “baseload electric generation
24 that will rely on subsection (7)” for compliance with the greenhouse gases emissions
25 performance standard.

23 ⁴ As will be discussed in more detail below, the fact that Energy NW could operate PMEC
24 by burning natural gas does not demonstrate that PMEC will satisfy the 1100 lbs/MWh
25 standard because Energy NW wishes to retain the flexibility to burn a variety of fuels at
26 PMEC, such as petcoke and coal, and does not propose that its site certification agreement
27 or other permits limit its operation to natural gas. Therefore, PMEC’s emissions will
28 exceed the 1100 lbs/MWh standard within the meaning of the Climate Change Law.

28 ⁵ *See also* RCW § 80.80.040(13) (providing that any project under consideration by
EFSEC by July 22, 2007, a classification which includes PMEC, must submit a “carbon

1 evaluation criteria will provide helpful guidance in undertaking this review. EFSEC would
2 benefit from further development of a number of the terms used in the statute. These
3 include the statutory terms “other approved sequestration,” “full and sufficient technical
4 documentation to support the planned sequestration,” “provisions for monitoring the
5 effectiveness of the implementation,” and “emissions reductions.” Moreover, the criteria
6 themselves, once interpreted and further developed through rulemaking, will provide both
7 the applicant and EFSEC with necessary guidance in developing or approving the “carbon
8 sequestration plan.”
9
10

11 Thus, the Washington legislature intended for the agencies to promulgate rules
12 *before* EFSEC moves forward with evaluating pending applications for new facilities.
13 EFSEC should stay the PMEC adjudicatory proceedings until the agencies have the
14 opportunity to promulgate rules to govern review of the GGRP.
15

16 **I.b. Even if Rulemaking is not a Prerequisite to EFSEC Review, the**
17 **Greenhouse Gas Reduction Plan Fails to Satisfy the Criteria**
18 **Enumerated in the Statute.**

19 Even if properly promulgated EFSEC and Ecology rules were not a prerequisite to
20 approval of a carbon sequestration plan, the GGRP fails to satisfy the express provisions of
21 the statute. Fundamentally, the GGRP is not a plan, but, rather, is a promise to make a
22 plan that satisfies the requirements of the statute sometime in the future. Because RCW
23 80.80.040(13) clearly requires submission of a “carbon sequestration plan” that satisfies
24 six specific criteria as part of the site evaluation process, this adjudication cannot go
25 forward until Energy NW provides such a plan. The GGRP fails to satisfy the six specific
26 criteria for the following reasons.
27

28

sequestration plan” that satisfies “the requirements of subsection (11) of this section.”
RCW § 80.80.040(13)).

1 **I.b.1. The Financial Assurances Included in the Greenhouse Gas Reduction**
2 **Plan Fail to Ensure Successful Implementation of Carbon**
3 **Sequestration.**

4 To satisfy RCW 80.80.040(11)(a), Energy NW must specify provisions for
5 financial assurances “sufficient to ensure successful implementation of the carbon
6 sequestration plan, including construction and operation of necessary equipment, and any
7 other significant costs.” Energy NW’s GGRP fails to specify plans to actually sequester
8 carbon, offers only promises to provide financial assurances in the future, and provides
9 only speculative plans with insufficient financial analyses regarding implementation costs.
10 EFSEC, therefore, cannot determine that Energy NW will meet the financial commitments
11 necessary to implement a carbon sequestration plan, as required by RCW 80.80.040(11)(a).
12

13 First, Energy NW cannot satisfy this criterion because Energy NW does not plan to
14 sequester its carbon dioxide emissions at PMEC. Rather, Energy NW plans to purchase
15 undisclosed emissions reductions to offset 20% of PMEC’s carbon emissions. Because
16 Energy NW does not plan to sequester carbon, the GGRP provides no financial analysis of
17 how carbon sequestration would affect the financial viability of the proposed project or
18 how carbon sequestration would impact the project’s ability to generate energy. In this
19 void, EFSEC cannot reasonably conclude that Energy NW has provided the financial
20 assurances necessary to ensure successful implementation of carbon sequestration.
21

22 Second, even if Energy NW could satisfy the standard in the absence of a specific
23 plan to sequester carbon, the GGRP’s general suggestions of planned expenditures do not
24 satisfy the requirement for sufficient financial assurances because they are too vague and
25 indefinite to support reasonable confidence that PMEC will meet its obligations under the
26 Climate Change Law. Again, Energy NW claims that it will develop appropriate financial
27
28

1 assurances in the future when it someday develops its specific plans for “sequestration or
2 mitigation” at PMEC. Promises of future action are not sufficient to satisfy a currently
3 applicable statutory duty. The Climate Change Law requires submission of the “carbon
4 sequestration plan,” including financial assurances to ensure successful implementation of
5 carbon sequestration, before EFSEC can propose a site certification agreement. RCW §
6 80.80.040(13).
7

8 Third, even if Energy NW could satisfy the requirement for financial assurances
9 through a promise to take future action, Energy NW’s assurances of future action are too
10 vague to provide any reasonable basis to conclude that the GGRP’s goals will be met. In
11 deciding whether Energy NW’s financial assurances are “sufficient,” EFSEC must first
12 evaluate whether Energy NW has offered a credible estimate of the cost of the
13 sequestration plan. The GGRP fails to provide any estimate for the actual costs for design,
14 construction and implementation of carbon sequestration. By way of analogy, it is useful
15 to look at the specificity of financial assurances required under other laws. When
16 evaluating financial assurances for landfills, Washington law requires that an
17 owner/operator prepare a reasonable cost estimate “for completing design, purchase,
18 construction and other activities identified in the facility closure or post-closure plan;” and
19 instructs that owner/operators provide one or more of the following “financial assurance
20 instruments:” trust funds; surety bond; irrevocable letter of credit; insurance; or satisfaction
21 of a corporate financial test and guarantee. WAC 173-304-468(2) & (3).
22
23
24

25 Far from providing specific financial assurances, the GGRP only provides vague
26 estimates of money allegedly available. The availability of funds without a description of
27 the costs does not satisfy the need for “financial assurance.” Specifically, the GGRP
28

1 explains that Energy NW will spend \$50 million to build the carbon capture equipment
2 necessary to separate up to 20% of the carbon dioxide from the gas stream “with minimal
3 future plant modification.” GGRP at 5. Energy NW also notes that it plans to reserve
4 property “for a water shifting expansion to increase capture capability.” GGRP at 5.
5 Energy NW further proposes to include “an operational budget for all permanent
6 sequestration,” additional assurances through undefined bonding capacity, and maintaining
7 a reserve of \$200 million for future implementation of sequestration or mitigation. GGRP
8 at 5. These vague assertions of what Energy NW may spend do not constitute a credible
9 estimate of the costs of the sequestration plan. Energy NW provides no information about
10 what successful implementation of sequestration will actually cost.
11

12
13 In addition, the GGRP fails to provide any detailed cost estimates for the purchase
14 of emissions offsets, upon which its plan entirely relies. As explained below, the purchase
15 of offsets does not satisfy the Climate Change Law’s requirement for a carbon
16 sequestration plan. Notwithstanding that offsets are legally insufficient, however, the
17 GGRP provides no information to inform EFSEC’s determination of whether the purchase
18 of emissions offsets to satisfy the carbon sequestration requirements would be
19 economically feasible. The cost of carbon emissions offsets is the subject of significant
20 study as the global economy responds to a carbon constrained future. Since the cost, or
21 even a reasonable estimate of a range of costs, is not included in the GGRP, EFSEC cannot
22 make a reasoned determination that Energy NW’s financial assurances are sufficient.
23
24

25 Further, the GGRP fails to indicate the form or mechanism of financial assurance.⁶
26 The GGRP is not specific enough to allow evaluation of whether the form of the financial
27

28 ⁶ The GGRP notes that “additional financial assurance” will be accomplished by satisfying the requirements for local governments pursuant to EPA’s rules implementing the

1 assurance is sufficient. For example, Energy NW indicates that it will include an operating
2 budget for permanent sequestration, but the GGRP does not indicate the extent to which
3 the budget will be funded and for how long. Similarly, Energy NW indicates it will
4 maintain a \$200 million reserve, but does not indicate whether this is an actual funds set-
5 aside, a bonding capacity, or financial guarantee. Moreover, Energy NW does not specify
6 how the \$200 million reserve will be held: in trust, escrow, bonding capacity, letters of
7 credit, or insurance. Without knowing the form of the assurance, EFSEC cannot make a
8 reasoned determination that the assurance is sufficient.
9
10

11 Overall, the GGRP is inadequate to satisfy the requirements of subsection (11)(a).
12 The GGRP fails to specify a plan for carbon sequestration. The GGRP fails to provide any
13 concrete financial assurances. The GGRP instead relies on promises of future planning.
14 The GGRP also fails to provide a specific and supported analysis of the costs of
15 implementing the plan. Finally, the GGRP fails to specify the form of future financial
16 assurances. Thus, Energy NW has failed to provide sufficient financial assurances to
17 ensure successful implementation of a carbon sequestration plan.
18

19 **I.b.2. The Greenhouse Gas Reduction Plan Fails to Specify Provisions for**
20 **Geological or Other Approved Sequestration Commencing Within Five**
21 **Years of First Operation.**

22 The “carbon sequestration plan” required by the Climate Change Law must include
23 “provisions for geological or other approved sequestration commencing within five years
24

25 Resource Conservation and Recovery Act (“RCRA”), 40 C.F.R. § 258.74. This regulation
26 does not apply to the process before EFSEC. Regardless, the GGRP fails to provide any of
27 the information required by that section to demonstrate that Energy NW would be eligible
28 for bonding capacity financial assurance in the RCRA context. Moreover, public owners
will own less than half of PMEC, and Energy NW has made no showing that the investors
in the private portion of the facility would qualify as municipal governments under the
RCRA regulation.

1 of plant operation.” RCW 80.80.040(11)(b). The carbon sequestration plan must also
2 include “full and sufficient technical documentation to support the planned sequestration.”

3 *Id.* The GGRP fails to satisfy these statutory requirements for the following three reasons:
4

5 (1) the GGRP does not propose to sequester its greenhouse gas emissions in geologic
6 formations;⁷ (2) the GGRP fails to include a plan for geological sequestration to commence
7 within five years of plant operation; and (3) the GGRP lacks technical documentation.

8 EFSEC must reject the GGRP and require that Energy NW submit a facially sufficient plan
9 including these elements before the adjudicative process can proceed.
10

11 First, the GGRP fails to specify provisions for geological greenhouse gas
12 sequestration. Any contention that the GGRP includes provisions for geological or other
13 approved permanent sequestration seems to stem from a fundamental error in defining
14 “geological or other approved sequestration.” Energy NW apparently defines “carbon
15 sequestration” to include purchasing emissions reduction credits from power plants in the
16
17
18
19

20 ⁷ As noted above, Ecology has approved no other permanent sequestration methods
21 pursuant to the Climate Change Law thus, Energy NW must satisfy the requirement for
22 provisions for sequestration through geological sequestration. Regardless, the GGRP’s
23 “other approved sequestration” proposal fails to satisfy the requirement that “other
24 approved sequestration” be implemented within five years of operation. Energy NW
25 asserts that “other permanent sequestration of the PMEC emissions necessary to meet the
26 emissions standard is not technologically or economically feasible at this time.” GGRP at
27 19. Energy NW indicates that if such sequestration becomes technologically and
28 economically feasible in the future, it will submit a proposal for approval by EFSEC.
GGRP at 19. Energy NW asserts that forest projects, agricultural projects, methane
capture and destruction, and investment in geological sequestration at another site are all
technically and economically infeasible. GGRP at 19. Energy NW fails to explain the
technological barriers or financial infeasibility of pursuing any of these options. The
GGRP is thus legally insufficient on this basis.

1 western interconnection and developing renewable energy resources.⁸ The purchase of
2 emissions offsets from other plants, however, is plainly not “carbon sequestration.”

3
4 Defined broadly in the context of chemistry, to sequester means “form a chelate or
5 other stable compound with (an ion, atom, or molecule) so that it is no longer available for
6 reactions.” New Oxford American Dictionary, 2d ed. (2005). The Big Sky Carbon
7 Sequestration Partnership, a group to which Energy NW belongs, defines “carbon
8 sequestration” as a technology that “involves capturing and permanently storing carbon
9 dioxide gases that could otherwise contribute to global climate change.” Big Sky Carbon
10 Sequestration Partnership, Questions and Answers at 1 (emphasis added) (attached as
11 RiverKeeper Ex. A). In the Energy Policy Act of 2005, Congress defined “carbon
12 sequestration” as “the capture of carbon dioxide through terrestrial, geological, biological,
13 or other means, which prevents the release of carbon dioxide into the atmosphere.” 22
14 U.S.C. § 7901; 42 U.S.C. § 13389 (emphasis added). The United States Department of
15 Energy defines “carbon sequestration” as “the capture and secure storage of carbon that
16 would otherwise be emitted to or remain in the atmosphere.” U.S. Dept. of Energy,
17 “Carbon Sequestration Research and Development,” Ch. 1, “Sequestration: A Third
18 Approach to Carbon Management,” at p. 1-3 (1999) (emphasis added) (attached as
19 RiverKeeper Ex. B).⁹ Because Energy NW does not plan to capture and permanently store

20
21
22
23
24 ⁸ Even if the purchase of emissions offsets and development of renewable energy could be
25 considered “carbon sequestration,” which as explained below, they cannot, the GGRP
26 lacks sufficient specificity in describing the emissions offsets or reductions Energy NW
27 plans to purchase, or the renewable energy resources it plans to develop to satisfy the
28 requirements of RCW 80.80.040(11)(b) (“Provisions Including full and sufficient
technical documentation to support the planned sequestration”). The GGRP provides no
specifics about the type or costs of projects that Energy NW plans to pursue as explained
in Section I.b.5. below.

1 carbon dioxide, Energy NW does not propose to sequester its carbon dioxide emissions, as
2 sequestration is understood by the U.S. Congress, U.S. expert agencies, and PMEC's own
3 Big Sky Sequestration Partnership.
4

5 Rather, Energy NW proposes to purchase emission offsets from other power plants
6 in the western interconnection or to develop new renewable generation to displace
7 greenhouse gas emissions. This proposal is based on a flawed reading of subsection (13)
8 of RCW § 80.80.040. Subsection (13) allows certain applicants to purchase emissions
9 reductions in lieu of sequestering carbon in narrowly defined situations. Meeting the
10 greenhouse gas emissions performance standard by purchasing sufficient verifiable
11 emissions reductions from power plants in the western interconnection becomes an option,
12 *only after* the applicant: (1) submits a carbon sequestration plan that satisfies the
13 requirements of RCW § 80.80.040(11); (2) demonstrates a good faith effort to implement
14 the plan; and (3) documents evidence of technological and economic barriers to carbon
15 sequestration. RCW § 80.80.040(13). The structure of this provision requiring that an
16 applicant first try to sequester greenhouse gases demonstrates the Washington legislature's
17 strong preference for sequestration, that is, prevention, to address climate change. This
18 provision does not authorize EFSEC to issue a site certification agreement to a facility that
19 has not met the initial requirement to submit a "carbon sequestration plan." Moreover, the
20 applicant cannot meet the emissions standards through reductions until it submits
21 documentation of both the good faith effort it has undertaken to accomplish the carbon
22 sequestration plan and evidence of technical or economic infeasibility. The GGRP skips
23 the initial three steps and simply moves on to purchasing emissions reductions.
24
25
26
27

28 ⁹ The cited section of this document is included in the attachment. The full document is available at http://fossil.energy.gov/sequestration/publications/1999_rdreport/index.html

1 Second, the GGRP fails to provide for the implementation of carbon sequestration
2 within five years of plant operation. The GGRP remarkably asserts that “GHG emissions
3 sequestration as specified in this plan will commence within five years of PMEC plant
4 operation.” GGRP at 5. In the same document, however, Energy NW states, “[t]his plan
5 does not propose any specific on-site or off-site sequestration testing or other specific
6 projects.” GGRP at 2. Energy NW further asserts that “PMEC will implement geological
7 sequestration when and if the technology of geological storage applications is proven
8 viable, regulatory policies are developed to support it, and the economics are competitive
9 with other GHG reduction alternatives.” GGRP at 12 (emphasis added). Finally, the
10 GGRP claims geological sequestration will not be available until 2020. GGRP at 18.
11 Therefore, it is clear from the GGRP that Energy NW has no intention of “commencing”
12 geological sequestration “within five years of plant operation” at PMEC.
13

14
15 Third, the GGRP lacks “full and sufficient technical documentation” as required by
16 RCW 80.80.040(11)(b). The statute clearly calls for technical support for a plan to
17 sequester carbon. As noted above, the GGRP does not propose to sequester carbon, thus
18 Energy NW admittedly fails to meet this standard. The GGRP fails to provide any analysis
19 of the technical and economic feasibility of carbon sequestration. The GGRP focuses on
20 the need to characterize the geological resources of the PMEC site. *See* GGRP at 15- 18.
21 Studying the site is certainly an important task in establishing a carbon sequestration plan.
22 It is not the only task, however. Energy NW essentially plans to characterize its site and
23 wait for the Department of Energy and other movers in the industry to make carbon
24 capture and storage risk-free and cheap. *See* GGRP at 18 (describing Department of
25 Energy pilot tests and need for “large-scale commercial units”). This discussion fails to
26
27
28

1 meet the statutory requirement for “full and sufficient technical documentation” of a plan
2 to sequester greenhouse gases.

3 EFSEC must reject the GGRP in its current form. The GGRP fails to satisfy the
4 requirements of RCW 80.80.040(11)(b) because it does not propose to sequester the
5 facility’s greenhouse gas emissions, it fails to include a plan for such geological
6 sequestration to commence within five years of plant operation, and it lacks the required
7 technical documentation.
8

9
10 **I.b.3. The Greenhouse Gas Reduction Plan Fails to Specify Sufficient**
11 **Provisions for Monitoring the Effectiveness of Proposed Greenhouse**
12 **Gas Reduction Measures.**

13 The Climate Change Law requires that the applicant specify “[p]rovisions for
14 monitoring the effectiveness” of the carbon sequestration plan. RCW § 80.80.040(11)(c).
15 As noted above, the GGRP fails to specify provisions for geological sequestration within
16 five years of operation. Because the GGRP fails to satisfy this requirement of the statute,
17 the GGRP necessarily lacks the requisite monitoring.

18 Even if the purchase of emissions reductions or development of renewable
19 resources would satisfy the statute, which they do not, the GGRP fails to provide the
20 monitoring necessary to determine the effectiveness of the plan. Rather than including any
21 specific monitoring requirements, the GGRP describes in broad and general terms the
22 types of monitoring that could be necessary for various forms of carbon sequestration and
23 mitigation projects. The GGRP simply provides:
24

25
26 Regardless of the option selected, emissions reduction will be verified by an
27 independent third party review from an entity approved by EFSEC to ensure actual
28 GHG emissions reductions and compliance with the law. For sequestration long-
term monitoring will be established to ensure permanency in accordance with a
plan submitted to EFSEC for approval once additional details are known.

1 GGRP at 5-6. This cannot be deemed an adequate monitoring plan because it fails to
2 include a single detail regarding monitoring. While specific requirements pursuant to
3 RCW § 80.80.040(11)(c) will be developed by Ecology and EFSEC in the rulemaking
4 process, a carbon sequestration plan must include, at a minimum, the following specific
5 monitoring provisions: (1) strategies to measure the amount of carbon dioxide stored; (2)
6 sufficient plans to monitor the site for leaks or deterioration of site integrity; and (3)
7 measurement and modeling of carbon migration. *See generally* Intergovernmental Panel on
8 Climate Change, *Special Report on Carbon Dioxide Capture and Storage* (2005) § 5.6, pp.
9 234-242 (attached as Riverkeeper Ex. C).¹⁰ Specific monitoring requirements for “other
10 approved sequestration” would logically be developed when Ecology approves the “other”
11 sequestration. Monitoring of carbon sequestration projects is essential for many reasons
12 including public and worker health and safety and environmental concerns. *See id.* § 5.7,
13 pp. 242-252 (discussing possible risks of carbon capture and storage).
14
15
16

17 Since Energy NW has not planned any sequestration, Energy NW necessary fails to
18 satisfy the requirements pertaining to monitoring the effectiveness of the implementation
19 of the sequestration plan. Even if the purchase of emissions reductions or development of
20 renewable resources would satisfy the statute, however, the GGRP fails to provide the
21 monitoring necessary to determine the effectiveness of the plan, as described in Section
22 I.b.5, below.
23
24
25
26
27

28 ¹⁰ The cited sections of this document are included in the attachment. The full document is available at <http://www.ipcc.ch/activity/srccs/index.htm> (last visited 10/17/07).

1
2 **I.b.4. The Greenhouse Gas Reduction Plan Fails to Specify Penalties for**
3 **Failure to Implement a Carbon Sequestration Plan on Schedule.**

4 The requirement that an applicant include penalty provisions in its own plan
5 underscores the need for rulemaking prior to evaluating the sufficiency of the carbon
6 sequestration plan because the regulatory agencies are in a better position to specify when
7 and how an applicant will be subject to penalties. In any event,” the GGRP fails to specify
8 penalties for failure to implement the carbon sequestration plan on schedule. The GGRP
9 penalty provision provides that failure to implement the plan will result in two possible
10 penalties: (1) PMEC will have to meet the greenhouse gases emissions performance
11 standard in some other way, i.e. firing natural gas; and (2) Energy NW will be subject to
12 enforcement action under RCW § 80.50.150. The first penalty is not a penalty, but, rather,
13 is the requirement of RCW Chapter 80.80 that applies at all times of its own force.
14 Whether or not Energy NW implements the GGRP, it must at all times operate its facility
15 in compliance with the greenhouse gases emissions performance standard.¹¹ The second
16 “penalty” is not a penalty for failure to implement the plan on schedule, either. Rather, the
17 GGRP simply references the enforcement authorities that EFSEC could exercise with
18 regard to PMEC in the event EFSEC issued a site certification. Nothing in those
19 authorities specifies a particular penalty or ensures a penalty will be assessed if PMEC
20 fails to implement its plan on schedule. The GGRP is thus legally insufficient.
21
22
23
24
25
26
27

28 ¹¹ Riverkeeper herein incorporates the argument of Northwest Energy Coalition,
Washington Environmental Council and Sierra Club in their Opening Brief on this point.
OPENING BRIEF OF
COLUMBIA RIVERKEEPER,
ROSEMERE NEIGHBORHOOD ASS'N, AND
WILLAPA HILLS AUDUBON SOCIETY
-19-
COLUMBIA RIVERKEEPER
917 SW Oak Street, Suite 414
Portland, OR 97205
(503) 224-3240

1
2 **I.b.5 The Greenhouse Gas Reduction Plan Lacks Specific Provisions for**
3 **Purchasing Emissions Reductions in the Event that a Carbon**
4 **Sequestration Plan Cannot be Successfully Implemented.**

5 Subsection (11)(e) requires that a carbon sequestration plan include “[p]rovisions
6 for an owner to purchase emissions reductions in the event of the failure of a sequestration
7 plan under subsection (13) of this section.” RCW § 80.80.040(11)(e). Subsection (13)
8 allows an owner to implement this section of the plan in the event that, after receiving a
9 final site certification, an owner makes a good faith effort to implement the carbon
10 sequestration plan, determines that such implementation is not feasible, and submits
11 documentation of the owner’s attempt to implement the plan and evidence of the technical
12 and financial reasons that implementation of the plan was unsuccessful. RCW §
13 80.80.040(13). Thus, in addition to the carbon sequestration plan that the owner must first
14 attempt to implement, the owner must submit a plan:
15

16
17 to meet the greenhouse gases emissions performance standard by purchasing
18 verifiable greenhouse gases emissions reductions from an electric generating
19 facility located within the western interconnection, where the reduction would not
20 have occurred otherwise or absence this contractual agreement, such that the sum
of the emissions reductions purchased and the facility’s emissions meets the
standard for the life of the facility.

21 RCW § 80.80.040(13). This plan must reduce emissions such that the “total emissions
22 associated with producing electricity” meet the greenhouse gases emissions performance
23 standard. RCW § 80.80.040(5). Energy NW’s plan to mitigate its greenhouse gas
24 emissions under this provision is insufficient.
25

26 Energy NW proposes to “implement the purchase of verifiable GHG emissions
27 from power plants in the western interconnection in order to meet the standard of 1,100 lbs
28 GHG/MWh.” GGRP at 21. The GGRP briefly identifies several possible sources of

1 verifiable emissions reductions. The GGRP describes the purchase of emissions
2 reductions from operations restrictions or efficiency projects. *Id.* It also describes the
3 development of renewable generation resources that would displace GHG emissions. *Id.*
4 In both cases, the GGRP fails to provide sufficient information to make a determination
5 that the plan will ensure the emissions reductions are verified, and would not have
6 occurred otherwise. Moreover, the emissions from PMEC are understated and the
7 proposed method of calculating the emissions reductions from other power plants are
8 overstated.

11 The GGRP sets out a plan that understates emissions from PMEC and overstates
12 emissions reductions at other plants where Energy NW seeks to procure credits. The
13 GGRP does not propose to calculate greenhouse gas emissions based on “total emissions
14 associated with producing electricity” as required by subsection (5). RCW § 80.80.040(5).
15 Instead, the GGRP explains that greenhouse gas emissions will be calculated from only the
16 combined cycle plant, tank vent oxidizer, and flare. GGRP at Ex. A. Emissions from
17 other sources are “associated with producing electricity” at PMEC. For example,
18 transporting coal from the Powder River Basin to PMEC, mining and processing coal, and
19 producing petcoke all generate greenhouse gas emissions that are “associated with
20 producing electricity” at PMEC. Similarly, gasification of coal on the PMEC site will
21 generate greenhouse gas emissions.¹² Thus, Energy NW understates the total greenhouse
22 gas emissions from PMEC that must be reduced to meet the greenhouse gases emissions
23 performance standard.

28 ¹² Riverkeeper herein incorporates the argument of Northwest Energy Coalition,
Washington Environmental Council and Sierra Club in their Opening Brief on this point.

1 Energy NW also overstates the effect of proposed reductions at other power plants.
2 The method of calculating emissions reductions from target power plants is inappropriate
3 for a number of reasons. First, the GGRP allows Energy NW to purchase credits for
4 “operating restrictions” without including sufficient detail to ensure that these restrictions
5 will result in actual reductions. For example, decreasing the number of operating hours at
6 a facility may reduce the emissions from that facility, but may also create a void in supply
7 that will likely be filled by another source. This is really just emissions shifting, not
8 emissions reductions. Moreover, the GGRP does not address how PMEC will ensure that
9 the efficiency improvements or renewable energy projects that it may propose in the future
10 would not have occurred without PMEC’s participation. *See generally*, World Resources
11 Institute & World Business Council for Sustainable Development, *The GHG Protocol for*
12 *Project Accounting* (Nov. 2005) at 8 (discussing concept of “additionality”) (attached as
13 Riverkeeper Ex. D).

17 Second, the GGRP proposes to calculate “baseline emissions” from existing
18 facilities from which Energy NW proposes to gain “emissions reductions” (hereinafter,
19 target plant(s)). Baseline emissions from target plants should be based on the actual
20 greenhouse gas emission rates. *Id.* at 58. Instead, the GGRP proposes the use of generic
21 emissions factors and maximum design fuel firing rate to calculate baseline emissions from
22 target plants. Maximum design fuel-firing rate does not reflect the actual fuel-firing rate
23 at a facility. That is, a power plant may be designed to operate a certain level but actually
24 operates at a lower level for any number of reasons, e.g. to reduce maintenance costs, due
25 to ongoing maintenance issues, or because the plant may simply not function as designed
26 on a reliable basis. Therefore, the emissions reduction should be based on average actual
27
28

1 emissions. *See id.* (noting that baseline emissions should be calculated on a GHG
2 emissions per unit of production basis). Quite simply, Energy NW proposes to calculate
3 the emissions reductions in the most favorable manner without considering what difference
4 the planned activity will actually make in emissions from the target facility. In other
5 words, under some formulations that would satisfy Energy NW's calculation, PMEC
6 would take credit for emissions that the target facility would not actually emit for reasons
7 other than PMEC's purchase.
8

9
10 Third, efficiency improvements must be carefully monitored because efficiency
11 improvements that allow a facility to generate the same amount of electricity while
12 combusting less fuel might also lead that facility to increase fuel input. *See generally*
13 *WRI/WBCSD, The GHG Protocol for Project Accounting* at 73. The GGRP fails to
14 specify the monitoring provisions to verify Energy NW's assumptions -- for instance, the
15 plan must include monitoring to ensure that the target plant does not burn more fuel
16 following the efficiency improvement than before the improvement.
17

18 Fourth, the GGRP's emissions reduction credits from renewable resource
19 development are based on oversimplified baseline emissions. Energy NW contends that it
20 should receive a credit of 1,100 pounds of greenhouse gas for each MW hour of renewable
21 generation that it develops. GGRP at 22. This amount is based on a typical new natural
22 gas combined cycle turbine. Energy NW should be required to provide evidence in each of
23 its renewables projects establishing the actual baseline. That is, Energy NW must analyze
24 and report on the type of generation that would have been installed to meet the need that its
25 renewables project is fulfilling in each case.
26
27
28

1 The GGRP's provisions to mitigate greenhouse gas emissions simply lack the detail
2 necessary to satisfy the requirements of RCW § 80.80.040(11) and (13). In addition,
3 EFSEC should clearly declare that the greenhouse gas mitigation plan can only be
4 implemented once Energy NW has demonstrated that it has made good faith efforts to
5 implement carbon sequestration and can document the steps it took and the technical or
6 economical infeasibility of continuing with the project.
7

8 **I.b.6. The Greenhouse Gas Reduction Plan Fails to Ensure Adequate Public
9 Notice and Comment.**

10 The GGRP fails to include adequate opportunities for public notice and comment.
11 The GGRP's public notice and comment provision states that adequate notice is given by
12 virtue of the fact that PMEC is in the midst of the EFSEC review process. Energy NW
13 requests that EFSEC issue public notice and provide an opportunity for public comment at
14 some point in the future when Energy NW provides a specific plan for achieving the
15 greenhouse gases emissions performance standard. GGRP at 6. This public notice and
16 comment provision is necessarily inadequate because the GGRP fails to set forth a specific
17 plan. Instead, the GGRP presents a range of options and indicates that at some point prior
18 to operation Energy NW will provide "[a] plan for the transition to geological and other
19 permanent sequestration for PMEC GHG emissions within the following five-year
20 period..." GGRP at 23. Thus, Energy NW does not plan to submit a carbon sequestration
21 plan until after final site certification has been issued by EFSEC. Energy NW's reliance
22 on the EFSEC site certification process to provide adequate opportunities for public notice
23 and comment is therefore absurd.
24
25
26

27 Moreover, the GGRP fails to indicate any opportunity for the public to challenge
28 Energy NW's determination that carbon sequestration is not technically or economically

1 feasible prior to operation or after operation commences. Energy NW essentially seeks to
2 postpone submission of the carbon sequestration plan to some point in the future when the
3 opportunity for public involvement is not guaranteed. The GGRP thus fails to ensure
4 adequate opportunities for public comment and review, as required by RCW §
5 80.80.040(f).
6

7 **II. EFSEC Must Reject Energy Northwest's Application as Incomplete**
8 **Until Energy Northwest Submits a Facially Adequate Carbon**
9 **Sequestration Plan.**

10 The Climate Change Law requires that an applicant submit a carbon sequestration
11 plan during EFSEC's review process. RCW § 80.80.040(13). The statute further specifies
12 that the carbon sequestration plan must satisfy the criteria listed in subsection (11). *Id.*
13 The GGRP does not constitute a facially adequate carbon sequestration plan because the
14 plan does not contain a plan for sequestering emissions. The GGRP essentially promises
15 to make such a plan in the future should carbon sequestration become, in Energy NW's
16 view, technically and economically feasible.
17

18 As described in detail above, the GGRP fails to adequately address the specific
19 requirements enumerated in subsection (11). EFSEC's regulations require that an applicant
20 submit a complete application before proceeding in the EFSEC process. WAC 463-60-
21 116. At this time, a "carbon sequestration plan" as required by the statute is not before
22 EFSEC, and thus PMEC's application can proceed no further. As explained in Section III,
23 below, EFSEC must require PMEC to submit a facially adequate "carbon sequestration
24 plan" before beginning the adjudicative hearing process.
25
26
27
28

1 **II.a. PMEC’s Greenhouse Gas Reduction Plan does not Constitute a Legally**
2 **Sufficient Carbon Sequestration Plan.**

3 As described above, the GGRP lacks adequate information to make a determination
4 that the plan will ensure that PMEC will satisfy the greenhouse gases emissions
5 performance standard. Moreover, the GGRP fails to include provisions that satisfy the
6 requirements of RCW § 80.80.040(11). Thus, the GGRP is legally insufficient.
7

8 To constitute a "legally sufficient" carbon sequestration plan, the plan must provide
9 enough information to allow Ecology and EFSEC to determine if the plan, when
10 implemented, will ensure that the proposed facility will comply with the greenhouse gases
11 emissions performance standard when operating as permitted and designed. In addition,
12 the Climate Change Law sets out a specific list of required provisions that the plan must
13 include. For instance, the law requires that Energy NW provide a plan for geological or
14 other approved greenhouse gas sequestration at its facility.
15

16 Energy NW has not provided that plan because the GGRP quite clearly states that
17 Energy NW does not plan to sequester emissions at PMEC. GGRP at 2 (“The plan does
18 not propose any specific on-site or off-site sequestration testing or other specific projects”).
19 As explained below, sufficient technical information exists at this time to formulate a plan
20 for successfully implementing greenhouse gas sequestration. The GGRP’s failure to
21 provide sufficient technical documentation on carbon sequestration forecloses appropriate
22 consideration by EFSEC, Ecology or public stakeholders.
23

24 In this void, the appropriate step is to require Energy NW to complete its
25 application by submitting a facially adequate carbon sequestration plan. Further review of
26 the application at this time, before it is complete, would waste EFSEC's and the parties'
27 resources. The law anticipates that the applicant will develop the sequestration plan, and
28

1 allowing the applicant to submit a facially invalid plan and then develop the plan to meet
2 legal requirements as part of the adjudicative process improperly shifts that burden to
3 EFSEC and the parties.
4

5 **II.b. The GGRP Fails to Satisfy the Statutory Requirement for Compliance**
6 **with Both the Greenhouse Gases Emissions Performance Standard in**
7 **the Climate Change Law and the Carbon Mitigation Provisions of**
8 **RCW § 80.70.**

9 The GGRP is insufficient because it fails to work in unison with Washington’s
10 Carbon Mitigation Law. The Carbon Mitigation Law requires that a fossil fuel-fired
11 electric generation facility mitigate 20% of its total carbon dioxide emissions. RCW §
12 80.70.020(4). The Climate Change Law requires that a baseload electric generation
13 facility meet a greenhouse gases emissions performance standard of 1100 pounds of
14 greenhouse gas per megawatt hour. RCW § 80.80.040(1)(a). Energy NW claims that
15 implementation of its plan to “sequester or offset more than 20% of its GHG emissions”
16 will satisfy the requirements of both the Carbon Mitigation Law and the Climate Change
17 Law simultaneously. GGRP at 2. If true, Energy NW’s contention would mean that one
18 law would supersede the other. This is incorrect. Each law imposes distinct and separate
19 duties on a source. A fossil fuel-fired baseload electric generation facility can, and must,
20 comply with both laws.
21

22 The Carbon Mitigation Law requires that PMEC mitigate 20% of its “total carbon
23 dioxide emissions.” RCW § 80.70.020(4). “Total carbon dioxide emissions” means:

24
25 the amount of carbon dioxide emitted over a thirty-year period based on the
26 manufacturer's or designer's guaranteed total net station generating capability, new
27 equipment heat rate, an assumed sixty percent capacity factor for facilities under
28 the council's jurisdiction or sixty percent of the operational limitations on facilities
subject to an order of approval, and taking into account any enforceable limitations
on operational hours or fuel types and use.

1 RCW 80.70.010(17). After making this calculation, Energy NW must mitigate 20% of the
2 carbon dioxide emissions from PMEC. RCW § 80.70.020(4). The plan to mitigate the
3 calculated 20% of carbon emissions (“carbon mitigation plan”) must accompany a
4 proposed site certification agreement sent to the Governor for approval. RCW §
5 80.70.020(2)(a).
6

7 To comply with the Climate Change Law, on the other hand, PMEC must meet the
8 greenhouse gases emissions limit on a pounds per megawatt hour basis for the life of the
9 facility. RCW § 80.80.040(1)(a). As described above, if the facility will exceed the
10 standard based on the type and amount of fuel fired, the facility must sequester sufficient
11 greenhouse gas emissions to meet the standard on a megawatt hour basis. For facilities
12 under consideration by EFSEC by July 22, 2007, the option to mitigate emissions rather
13 than sequester may be available after the facility receives a final site certification only if
14 the facility fails in its efforts to implement sequestration.
15
16

17 The mitigation included as a failsafe in the “carbon sequestration plan” cannot be
18 counted as the 20% mitigation required in the “carbon mitigation plan.” The Carbon
19 Mitigation Law specifically prohibits using carbon credits “otherwise required by statute,
20 regulation or other legal requirements” to satisfy the 20% mitigation requirement. RCW §
21 80.70.030(1). Similarly, the Climate Change Law only allows an applicant to use
22 emissions reductions that “would not have occurred otherwise or absent this contractual
23 agreement.” RCW § 80.80.040(13). Thus, if the emissions reductions are used to satisfy
24 the 20% carbon mitigation requirement in the Carbon Mitigation Law, they cannot be
25 simultaneously used to meet the greenhouse gas emissions performance standard in the
26 Climate Change Law.
27
28

1 Moreover, Energy NW’s position that compliance with the Carbon Mitigation
2 Law’s mitigation requirements is equivalent to compliance with the pounds per megawatt
3 hour standard in the Climate Change Law, or *vice versa*, effectively renders one of the
4 statutes a nullity. This is an impermissible outcome under Washington state law and is
5 contrary to the intent of the Washington legislature in establishing the Climate Change
6 Law. The Climate Change Law specifically excluded emissions sequestered or mitigated
7 pursuant to an approved carbon sequestration plan from the definition of “emissions.”
8 RCW § 80.80.040(7)(c). This exclusion takes those emissions out of the definition of
9 “total carbon dioxide emissions” under the Carbon Mitigation Law. RCW §
10 80.70.010(17). Therefore, the facility need only mitigate 20% of emissions remaining
11 after compliance with the Climate Change Law.
12
13

14 EFSEC must give effect to the express intent of legislature, where, as here,
15 compliance with both statutes entirely possible. The Climate Change Law requires that
16 PMEC satisfy an emission limit expressed in pounds per megawatt hour while the Carbon
17 Mitigation Law requires that PMEC implement a plan to mitigate through emission
18 reductions 20% of its total carbon dioxide emissions as calculated through a regulatory
19 formula. The Climate Change Law does not supersede the Carbon Mitigation Law because
20 they do not conflict and should be read to give effect to both statutes. *See Waste*
21 *Management of Seattle, Inc. v. Utilities & Transp. Comm’n*, 123 Wash. 2d 621, 630 (1998)
22 (holding that statutes related to the same subject ““are to be read together as constituting a
23 unified whole, to the end that a harmonious total statutory scheme evolves which maintains
24 the integrity of the respective statutes”” (quoting *State v. Wright*, 84 Wash. 2d 645,
25 650(1974))). Generally, where two statutes relate to the same subject matter, they should
26
27
28

1 be interpreted to give meaning and effect to both when they are not actually in conflict.
2 *Davis v. King County*, 77 Wash. 2d 930, 933 (1970). Moreover, two related statutes
3 should be read as complementing each other rather than conflicting where such a
4 construction is possible. *State v. O'Brien*, 115 Wash. App. 599, 601 (Wash. App. Div. 3,
5 2003). The Climate Change Law and the Carbon Mitigation Law can easily be read to
6 supplement rather than supplant each other, as compliance with both independently is
7 clearly possible.
8

9
10 Further, the statement in the Climate Change Law that the “greenhouse gases
11 emissions performance standard will work in unison with the state’s carbon dioxide
12 mitigation policy,” does not indicate that the legislature intended to supersede the carbon
13 dioxide mitigation policy with the emissions performance standard. On the contrary, the
14 Washington legislature intended for the two statutes to apply at the same time. In hearings
15 before the House Technology, Energy and Communications Committee, committee
16 members questioned what “work in unison” meant in Senate Bill 6001. The Committee
17 received testimony clarifying that both requirements would apply independent of one
18 another. House Tech., Energy & Communications Cmte. Hearing (March 27, 2007)
19 (statement of Sara Patton, Executive Director of Northwest Energy Coalition explaining
20 how Senate Bill 6001 and RCW § 80.70 work together) (audio file available at
21 <http://198.239.32.186/200703/2007031183.mp3>). It was with this understanding that the
22 Climate Change Law passed in the House. Therefore, EFSEC should not conclude that
23 actions taken to comply with the Climate Change Law can also be considered when
24 determining compliance with the Carbon Mitigation Law.
25
26
27
28

1 **II.c. The Greenhouse Gas Reduction Plan does not Constitute a "Good**
2 **Faith" Effort to Comply with the Statutory Requirement to Implement**
3 **a Plan for the Geological Sequestration or Other Approved**
4 **Sequestration of Greenhouse Gases.**

5 Nothing in the Climate Change Law allows an applicant to satisfy the statutory
6 requirement to submit a sequestration plan by making a “good faith” effort to do so.
7 Instead, the Climate Change Law requires that an applicant submit a carbon sequestration
8 plan during the EFSEC process that satisfies specific statutory provisions. No amount of
9 “good faith” can make a legally insufficient plan sufficient under the law. The Climate
10 Change Law does state that an owner/operator of a baseload electric generating facility
11 under consideration by EFSEC by July 22, 2007, must demonstrate a “good faith” effort to
12 comply with its approved carbon sequestration plan before implementing its fall-back
13 mitigation plan. RCW § 80.80.040(13). Whether a facility can implement its mitigation
14 plan rather than its sequestration plan after it has received a final site certification
15 agreement is, however, a wholly different question from whether an applicant has
16 submitted a carbon sequestration plan that complies with the statute during the EFSEC
17 process. If a legally sufficient plan has not been submitted, EFSEC cannot grant a site
18 certification agreement for construction.
19
20

21 **II.d. Assuming that EFSEC Issued a Final Site Certification Agreement**
22 **Based on the Greenhouse Gas Reduction Plan, Implementation of that**
23 **Plan would not Constitute a Good Faith Effort to Implement the**
24 **Climate Change Law.**

25 As described above, the GGRP does not contain the requisite financial assurances,
26 provisions for geological or other approved sequestration, monitoring requirements,
27 penalty provisions, or provisions for the purchase of verifiable greenhouse gas reductions
28 at other facilities to constitute a good faith effort to implement the Climate Change Law.

1 The GGRP is essentially a plan to make a plan in the future. Energy NW must satisfy the
2 specific requirements of what constitutes a valid sequestration plan under Chapter 80.80
3 RCW now. The sequestration plan requirements in the statute cannot be satisfied through a
4 promise to satisfy those requirements in the future. The action called for in the GGRP is
5 essentially writing another plan. Since the GGRP does not include a date by which a plan
6 to sequester carbon will finally be provided, this planning to plan could continue *ad*
7 *infinitum*. Thus, implementation of the GGRP cannot constitute a “good faith effort” to
8 implement the Climate Change Law. Indeed, to the contrary, the GGRP is plainly illegal.

11 **II.e. The Technology Necessary for Energy Northwest to Create and Present**
12 **a Facially Sufficient Carbon Sequestration Plan Currently Exists.**

13 It is certainly technically feasible to sequester carbon dioxide underground as a
14 general matter. Statoil in Norway has been injecting carbon dioxide at a rate of
15 approximately one million tons per year into a sandstone formation since 1996. *See*
16 “Carbon Dioxide Storage Prized,” Statoil (Aug. 12, 2000 (attached as Riverkeeper Ex. E)).
17 The Intergovernmental Panel on Climate Change (IPCC) has recognized Statoil’s project,
18 known as Sleipner, as one of “[t]hree industrial-scale storage projects [] in operation.”
19 Riverkeeper Ex. C, IPCC, *Special Report on Carbon Dioxide Capture and Storage*, p. 7.
20 The other two projects are the Weyburn EOR project in Canada and the In Salah project in
21 Algeria. *Id.* An “industrial scale” project is one that stores on the order of one million
22 tons of carbon dioxide per year. *Id.* at 7, n.12.

25 The IPCC describes carbon capture and storage (CCS) as a “known technological
26 option,” which it defines as a technology that exists “in operation or in the pilot plant stage
27 at the present time ... [but i]t does not include any new technologies that will require a
28 profound technological breakthroughs.” *Id.* p. 3 n.1. The IPCC has also concluded that

1 techniques to separate and store carbon dioxide are based on existing technologies. *Id.* at
2 5-6. In addition, other proposed facilities are planning carbon capture and storage on a
3 timeline consistent with P MEC’s operation schedule. For example, the Wallula Power
4 Station applied to EFSEC on October 9, 2007, for a site evaluation for an IGCC plant with
5 carbon capture and storage in basalts. In addition, BP plans a petcoke-fired IGCC plant
6 with precombustion capture and storage operating in 2011. *See* BP Presentation before
7 California Energy Commission (May 29, 2007) (attached as RiverKeeper Ex. F). BP
8 estimates carbon dioxide emissions of under 400 lbs/MWh from the proposed facility. *Id.*
9 at p. 7. RWE Power, one of Europe’s largest power producers, is currently planning a 450
10 MW IGCC plant with carbon capture and storage, to be operational by 2014. *See* RWE
11 Power, Climate Protection Programme: IGCC Power Plant with CO₂ Storage (attached as
12 RiverKeeper Ex. G). RWE Power plans to safely store 2.3 million tons of carbon dioxide
13 per year during the IGCC plants operation. *Id.* at p. 8. These existing projects and
14 proposals demonstrate that it is possible for an energy company to have a specific proposal
15 for carbon capture and storage consistent with P MEC’s timeline for commencing
16 commercial operations. The Climate Change Law requires just that from Energy NW in a
17 carbon sequestration plan.

18
19 In the *Special Report on Carbon Dioxide Capture and Storage*, the IPCC observed
20 that while “[c]omplete CCS systems can be assembled from existing technologies that are
21 mature or economically feasible under specific conditions,” utilization of CCS by “large-
22 scale power plants” has not been implemented. Riverkeeper Ex. C, IPCC, *Special Report*
23 *on Carbon Dioxide Capture and Storage*, p. 8. Still, the Washington Climate Change Law
24 clearly prefers CCS to mitigation to meet the greenhouse gases performance standard.
25
26
27
28

1 This strong preference encourages Washington power plants to overcome technical
2 difficulties and implement feasible technologies. The IPCC has concluded that pre-
3 combustion carbon capture, as proposed for PMEC, and geological storage in gas or oil
4 fields and saline formations are “economically feasible under specific conditions.”¹³ *Id.* at
5 21, Table TS.1. The IPCC considers storage for Enhanced Oil Recovery (EOR) a “mature
6 market.” A “mature market” technology is one currently in operation with multiple
7 replications worldwide. *Id.*

9
10 In striking contrast with IPCC’s assessment, Energy NW summarily concludes that
11 “geological sequestration is not technologically or economically feasible for PMEC’s
12 expected CO₂ emissions at this time...” GGRP at 18. Clearly, carbon sequestration is
13 technically and economically feasible for those commercial operators who are currently
14 employing the technology. Energy NW’s claims to the contrary do not satisfy Energy
15 NW’s duty under the Climate Change Law to submit a reasonable plan to successfully
16 sequester carbon. While the law does not require that an applicant “guarantee” that efforts
17 to sequester carbon dioxide will work, the law does require that the applicant has a
18 sufficiently detailed and supported plan. The GGRP does not contain *evidence* that carbon
19 sequestration would be technically or financially infeasible at PMEC. Rather, the GGRP
20 simply fails to formulate a plan for carbon sequestration. This failure violates the Climate
21 Change Law, and unsupportable claims of technological infeasibility cannot excuse this
22 violation.
23
24
25
26

27 ¹³ “Economically feasible under specific conditions means that the technology is well
28 understood and used in selected commercial applications, for instance if there is a
favourable tax regime or a niche market, or processing on in the order of 0.1 MtCO₂ yr,
with few (less than 5) replications of the technology.” *Id.* at 21, Table TS.1 n. c.

1 **II.f. The Proposal to Operate PMEC as a Natural Gas Combined Cycle**
2 **Facility Fails to Address the Requirements of the Climate Change Law**
3 **and the Carbon Mitigation Law.**

4 The option of firing natural gas does not excuse Energy NW’s failure to provide a
5 sufficient carbon sequestration plan. PMEC is not being sited as a natural gas combined
6 cycle facility. If PMEC were being sited as such, and thus limited in its air permits and
7 final site certification to firing natural gas, the facility would be in compliance with the
8 performance standard in the Climate Change Law, assuming Energy NW could
9 demonstrate that actual emissions will be less than 1100 lbs/MWh. That is not the case
10 here. The site certification application clearly demonstrates that Energy NW proposes to
11 build an IGCC facility that is capable of firing a variety of fuels, including coal and
12 petcoke. One of the stated goals of the development is the flexibility to fire a variety of
13 fuels. Therefore, Energy NW must meet the pre-site certification requirements applicable
14 to a facility that will burn coal and petcoke. This includes submitting a legally sufficient
15 carbon sequestration plan pursuant to the Climate Change Law. RCW § 80.80.040(13).
16 For the reasons noted above, the GGRP fails to satisfy the statute, and the option of firing
17 natural gas to meet the numeric criteria of the performance standard cannot salvage the
18 plan and allow EFSEC to issue a final site certification.

19 Energy NW may have the option to apply for a site certification authorizing the
20 construction and operation of a natural gas facility, and to later request an amendment to
21 allow the facility to burn other fuels in the future when the facility can comply with the
22 Climate Change Law pursuant to WAC 463-66-030, but Energy NW has not elected to
23 follow that path. Moreover, a plant firing natural gas still must satisfy the Carbon
24 Mitigation Law as described in Section II.b., above.

1 **III. Energy NW Failed to Provide a Facially Adequate Carbon**
2 **Sequestration Plan at the Relevant Point in EFSEC's Decisionmaking**
3 **Process.**

4 As explained in detail above, the GGRP is facially inadequate in numerous
5 respects. EFSEC should stay the adjudicative hearing until Energy NW submits a facially
6 sufficient carbon sequestration plan. If EFSEC deems that the GGRP is deficient on its
7 face and rejects the GGRP, Energy NW may later submit a facially adequate carbon
8 sequestration plan for P MEC and remain vested under RCW § 80.80.040(13).

9 **III.a. Energy NW Must Submit a Facially Adequate Carbon Sequestration**
10 **Plan Before the Adjudicative Process Begins Because EFSEC Rules**
11 **Require that Minimization and Mitigation Plans Be Included in Site**
12 **Certification Applications.**

13 The rules governing the EFSEC process require that an applicant include measures
14 in the site certification application to minimize and mitigate the adverse impacts that the
15 project will cause. WAC § 463-60-085. Section 463-60-085 states, “[t]he application
16 shall summarize the impacts to each element of the natural or built environment and the
17 means to be utilized to minimize or mitigate possible adverse impacts during construction,
18 operation, and decommissioning of the proposal, all associated facilities, and any
19 alternatives being brought forward.” WAC § 463-60-085. Thus, the application for site
20 certification must include all proposed measures to minimize or mitigate adverse impacts
21 to the environment throughout the life of the facility.

22 The purpose of the carbon sequestration plan is to minimize and mitigate the
23 adverse impacts to the environment of the facility’s greenhouse gas emissions. The
24 Washington legislature passed the Climate Change Law, in part, to “establish statutory
25 goals for the statewide reduction in greenhouse gases emissions.” RCW § 80.80.005(3).
26 The Washington legislature further intended the Climate Change Law to “authorize
27
28

1 immediate actions in the electric power generation sector for the reduction of greenhouse
2 gases emissions.” *Id.* To meet this goal, the Climate Change Law requires an applicant to
3 include a carbon sequestration plan during the EFSEC review process. RCW §
4 80.80.040(13). Therefore, because Energy NW must include a carbon sequestration plan
5 during the EFSEC review process and because WAC § 463-60-085 requires minimization
6 and mitigation measures to be included in site certification applications, Energy NW must
7 submit its carbon sequestration plan in its site certification application. This means that
8 Energy NW must submit a facially adequate sequestration plan, not just a GGRP, before
9 the adjudicative process may begin.
10
11

12 To be facially adequate, the minimization and mitigation section of Energy NW’s
13 site certification application must contain the project description criteria that WAC Chapter
14 463-30 requires. WAC § 463-60-115. Only if Energy NW shows that an item of the
15 project description criteria does not apply to its proposed project can it choose to not
16 include that item in its site certification application. *Id.* Moreover, WAC § 463-60-312
17 requires that Energy NW include a section focusing on air quality as a part of the
18 minimization and mitigation plan. Section 463-60-312 states, “[t]he application shall
19 identify all pertinent air pollution control standards . . . [t]he applicant shall describe the
20 means to be utilized to assure compliance with applicable local, state, and federal air
21 quality and emission standards.” WAC § 463-60-312(1). Because the carbon
22 sequestration plan is a means to achieve the state’s greenhouse gas emissions performance
23 standard, Energy NW must include it in its site certification plan.
24
25

26 Because Energy NW must submit a carbon sequestration plan as part of its
27 minimization and mitigation plan, WAC § 463-60-116 requires that it submit a facially
28

1 adequate plan before the adjudicative process begins. This result is compelled by the
2 language of WAC § 463-60-116. First, Section 463-60-116 requires that applications to
3 EFSEC for site certification be complete and reflect the best available current information
4 and intentions of the applicant. WAC § 463-60-116(1). Second, Section 463-60-116 only
5 allows the applicant to submit amendments to a pending application if it presents them to
6 EFSEC at least thirty days prior to the commencement of the adjudicative hearing. WAC
7 § 463-60-116(2). Third, Section 463-60-116 allows for the applicant to submit to EFSEC
8 application amendments which include all commitments and stipulations made by the
9 applicant during the adjudicative hearings within thirty days after the conclusion of the
10 hearings. WAC § 463-60-116(3). Reading these three subsections of Section 463-60-116
11 together in light of the purpose of the EFSEC adjudicatory hearing compels the conclusion
12 that Energy NW's carbon sequestration plan must be facially sufficient before the hearing
13 can begin. Therefore, EFSEC must delay the adjudicative review of the application until
14 the applicant submits a legally sufficient sequestration plan.

15
16
17
18 **III.b. EFSEC Should Not Allow Energy NW to Simply Modify Its Proposal**
19 **During the Hearing Process Because this will Thwart the Goals of the**
20 **EFSEC Adjudicative Hearing.**

21 EFSEC should halt the adjudicatory process until Energy NW submits a facially
22 adequate sequestration plan, rather than allowing Energy NW to simply modify its
23 proposal throughout the hearing process. The administrative rules described above
24 governing the adjudicative process require complete applications, and they set forth only
25 very limited circumstances in which amended or supplemental materials can be considered
26 in the process. *See* WAC § 463-60-116. The purpose of the adjudicatory hearing is to
27 provide a forum where EFSEC and other parties can analyze the site certification
28

1 application. If it becomes apparent during the adjudicative process that amendments to the
2 application are necessary, the applicant can submit those amendments up until 30 days
3 after the adjudicatory process is complete. Then, based on the sufficiency of those
4 amendments as well as the contents of the site certification application, EFSEC determines
5 whether it will make a recommendation to the Governor that she approve the project.
6
7 WAC § 463-28-060. It is critical to the integrity of this process that the applicant submit a
8 facially adequate site certification plan before the adjudicative process begins. If, pursuant
9 to WAC § 463-60-116(3), the applicant could submit the required elements at any time
10 during the adjudicative hearing, the deadlines established by subsections (1) and (2) would
11 be meaningless. EFSEC should not interpret its regulations to render parts of the
12 regulation inoperative.
13

14 It is imperative that Energy NW include a facially adequate carbon sequestration
15 plan as part of its site certification application. Otherwise, EFSEC and other parties will
16 not be able to effectively analyze the plan and enter into commitments and stipulations
17 with Energy NW for the kind of minor amendments and stipulations called for by
18 subsection (3). In addition, EFSEC will not be able to make a sound determination as to
19 whether it should recommend the approval of the Energy NW project to the Governor.
20
21

22 **III.c. If EFSEC Rules that the GGRP is Facially Deficient, Energy NW May**
23 **Reapply Later and Remain Vested.**

24 If EFSEC deems that the GGRP is deficient on its face and rejects the GGRP,
25 Energy NW may later submit a facially adequate carbon sequestration plan for PMEC and
26 remain vested under RCW § 80.80.040(13). Subsection (13) allows a “project under
27 consideration by the energy facility site evaluation council by July 22, 2007,” that makes a
28 good faith effort to implement carbon sequestration and can adequately demonstrate both

1 the steps taken and the technical or financial infeasibility of implementation precluding
2 success, to implement a plan for offsetting greenhouse gases with emissions reductions.
3 Assuming that Energy NW makes substantially the same proposal in the future, that is, an
4 IGCC facility of the same size and fuel characteristics, PMEC is a project that was under
5 consideration by EFSEC by July 22, 2007, and the project is vested under subsection (13).
6

7 **IV. EFSEC Lacks Authority to Propose a Site Certification Agreement**
8 **when the Applicant has Failed to Satisfy Statutory Requirements that**
9 **are Prerequisites to Receiving a Site Certification Agreement.**

10 The statutes and regulations governing EFSEC’s administration of the site
11 certification process do not grant EFSEC authority to issue a conditional site certification
12 where the applicant has failed to satisfy application requirements. A “site certification
13 agreement” is a binding agreement between the state of Washington and the applicant.
14 WAC 463-10-010(7). The agreement contains the conditions under which the facility may
15 be constructed and operated. *Id.* As discussed above, an applicant must submit a “carbon
16 sequestration plan” to EFSEC during the “energy facility site evaluation council process.”
17 RCW § 80.80.040(13).
18

19 The EFSEC process includes six major steps. First, the energy utility submits a
20 proposal for a project. RCW § 80.50.090. Second, the energy utility and EFSEC hold an
21 informational public hearing to inform the public of the proposed project. RCW §
22 80.50.090(1). Third, the energy utility and EFSEC hold a public hearing to determine
23 whether the proposed project complies with local land use regulations. RCW §
24 80.50.090(2). Fourth, EFSEC holds adjudicative hearings so that it and other parties can
25 analyze the energy utility’s site certification application and so that EFSEC can determine
26 whether it should recommend approval of the project to the Governor. WAC § 463-60-
27
28

1 116; WAC § 463-28-060. Fifth, EFSEC reports its recommendations for approval or
2 denial of the proposal to the Governor. RCW § 80.50.100. And sixth, the Governor
3 approves the application and executes a draft certification agreement, rejects the
4 application, or directs the council to reconsider certain aspects of the draft certification
5 agreement. *Id.* Once EFSEC has proposed a site certification agreement to the Governor,
6 the “energy facility site evaluation council process” has concluded. The certificate holder
7 is authorized to construct and operate a facility subject to the terms and conditions
8 contained in the agreement after it is signed by the Governor. WAC 463-68-020.

9
10
11 EFSEC cannot include terms and conditions in the agreement to ensure
12 implementation of the required carbon sequestration plan if EFSEC has not reviewed a
13 legally sufficient plan. In addition, the goal of EFSEC’s review is to ensure that any
14 constructed energy facility will meet all of the applicable requirements of the laws and
15 rules regulating energy facilities in the state. If PMEC is constructed and it is later
16 determined that PMEC cannot meet the greenhouse gases emissions standard either
17 through carbon sequestration or through the alternate compliance provisions of subsection
18 (13), a significant problem arises. If construction of the project begins before Energy NW
19 submits a legally sufficient carbon sequestration plan, it will be difficult or impossible to
20 integrate certain plans into the actual structure of the proposed Energy NW facility. That is
21 why the law requires the submission of a plan *prior to* the issuance of a site certification
22 agreement. Once the site is certified, the state’s options to ensure compliance with the
23 emissions performance standard while encouraging the availability of affordable electricity
24 may be significantly hindered. For these reasons, EFSEC must require the submission of a
25
26
27
28

1 legally sufficient carbon sequestration plan prior to proposing a site certification agreement
2 to the Governor.

3
4 **CONCLUSION**

5 For the reasons stated above, Columbia Riverkeeper, Rosemere Neighborhood
6 Association and Willapa Hills Audubon Society respectfully request that EFSEC declare
7 that the Greenhouse Gas Reduction Plan fails to satisfy the Climate Change Law and the
8 Carbon Mitigation Law, require Energy NW to complete its application by submitting a
9 facially adequate carbon sequestration plan, and stay the adjudicative proceeding until such
10 time as Energy NW has satisfied this requirement.
11

12 DATED: October 24, 2007.

13 Respectfully Submitted,

14
15 

16 Brett VandenHeuvel
17 Staff Attorney
18 Columbia Riverkeeper
19 917 SW Oak, Suite 414
20 Portland, OR 97205
21 (503) 224-3240
22 bv@columbiariverkeeper.org
23
24
25
26
27
28

1 **RIVERKEEPER EXHIBIT LIST**

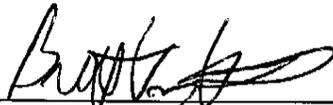
- 2 **Exhibit A** Big Sky Carbon Sequestration Partnership, Frequently Asked Questions,
3 available at <http://www.bigskyco2.org/FAQs-carbon.htm> (last visited
4 October 22, 2007).
- 5 **Exhibit B** U.S. Dept. of Energy, "Carbon Sequestration Research and Development,"
6 Ch. 1, "Sequestration: A Third Approach to Carbon Management" (1999)
(Excerpts).
- 7 **Exhibit C** Intergovernmental Panel on Climate Change, *Special Report on Carbon*
8 *Dioxide Capture and Storage* (2005) (Excerpts).
- 9 **Exhibit D** World Resources Institute & World Business Council for Sustainable
10 Development, *The GHG Protocol for Project Accounting* (Nov. 2005).
- 11 **Exhibit E** "Carbon Dioxide Storage Prized," Statoil (Aug. 12, 2000), available at
12 [http://www.statoil.com/statoilcom/SVG00990.NSF?OpenDatabase&artid=](http://www.statoil.com/statoilcom/SVG00990.NSF?OpenDatabase&artid=01A5A730136900A3412569B90069E947)
13 [01A5A730136900A3412569B90069E947](http://www.statoil.com/statoilcom/SVG00990.NSF?OpenDatabase&artid=01A5A730136900A3412569B90069E947) (last visited October 16, 2007).
- 14 **Exhibit F** BP Presentation before California Energy Commission (May 29, 2007),
15 available at [http://www.energy.ca.gov/.../2007-05-](http://www.energy.ca.gov/.../2007-05-29_workshop/presentations/Kostrzewa_Carson_Hydrogen_Power_Project.pdf)
16 [29_workshop/presentations/Kostrzewa_Carson_Hydrogen_Power_Project.p](http://www.energy.ca.gov/.../2007-05-29_workshop/presentations/Kostrzewa_Carson_Hydrogen_Power_Project.pdf)
17 [df](http://www.energy.ca.gov/.../2007-05-29_workshop/presentations/Kostrzewa_Carson_Hydrogen_Power_Project.pdf) (last visited October 22, 2007).
- 18 **Exhibit G** RWE Power, Climate Protection Programme: IGCC Power Plant with CO₂
19 Storage [http:// www.rwe.com/generator.aspx/konzern/fue/strom/co2-freies-](http://www.rwe.com/generator.aspx/konzern/fue/strom/co2-freies-kraftwek/co2sink/language=en/id=272116/page-co2sink.html)
20 [kraftwek/co2sink/language=en/id=272116/page-co2sink.html](http://www.rwe.com/generator.aspx/konzern/fue/strom/co2-freies-kraftwek/co2sink/language=en/id=272116/page-co2sink.html) (last visited
21 October 15, 2007).
22
23
24
25
26
27
28

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all parties of record in this proceeding, by authorized method of service pursuant to WAC 463-30-120(3), Council Order 832 of September 26, 2007, allowing service on all parties via electronic mail, and the waivers submitted by each party consenting to service via electronic mail.

DATED: October 24, 2007



Brett VandenHeuvel
Staff Attorney
Columbia Riverkeeper