

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:
Invenergy Thermal Development LLC's
Proposal for Clear River Energy Center

Docket No. SB 2015-06

**PRE-FILED REBUTTAL TESTIMONY
OF
SCOTT COMINGS**

CONSERVATION LAW FOUNDATION
235 Promenade Street
Suite 560, Mailbox 28
Providence, RI 02908
(401) 351-1102

1 **Q. Are you the same Scott Comings who provided pre-filed direct testimony in this case dated**
2 **September 22, 2016?**

3 A. Yes, I am.

4 **Q. Are you familiar with the June 30, 2017 Pre-Filed Direct Testimony of Jason Ringler, an expert**
5 **witness retained by Invenergy Thermal Development, LLC (“Invenergy”)?**

6 A. Yes, I have read Mr. Ringler’s testimony.

7 **Q. Are there matters in Mr. Ringler’s testimony to which you would like to respond?**

8 A. Yes, there are three matters in Mr. Ringler’s testimony that I would like to respond to. First, Mr.
9 Ringler relies on the Rhode Island Wildlife Action Plan, or “WAP,” in a manner that is inappropriate and
10 incorrect. Second, Mr. Ringler presents incorrect testimony regarding the computer program
11 Circuitscape and its application to northwestern Rhode Island. Third, based on these faulty analyses,
12 Mr. Ringler draws incorrect conclusions regarding the ecological damage the proposed Invenergy power
13 plant would cause by severing a pinchpoint in an ecologically connected habitat corridor.

14 **Q. Before we proceed to those matters, what was your overall impression of Mr. Ringler’s**
15 **testimony?**

16 A. In several important respects, which I will unpack in more detail below, Mr. Ringler’s testimony
17 is both untrue and irrelevant. The simple fact is that, through years of study conducted long before
18 Invenergy ever considered proposing a power plant in Burrillville, Rhode Island determined that the site
19 of the proposed plant is unique and irreplaceable from a conservation perspective because of its
20 connectivity to the larger landscape. Building a power plant on the site selected by Invenergy would
21 have a severe negative impact on what the Rhode Island conservation community has long known is a
22 regionally important habitat corridor and, in doing so, cause unacceptable harm to the environment.

23 **Q. Was there anything in Mr. Ringler’s testimony that led you to change any opinion expressed in**
24 **your earlier Pre-Filed Direct Testimony?**

1 A. No. I stand by my original testimony and my conclusion to a reasonable degree of scientific
2 certainty that building a power plant on the site currently proposed for it would cause unacceptable
3 harm to the environment. On this basis, I once again urge the Energy Facility Siting Board not to issue a
4 permit for Invenergy's proposed power plant.

5 **RHODE ISLAND WILDLIFE ACTION PLAN**

6 **Q. Mr. Ringler refers to the Rhode Island Wildlife Action Plan, or "WAP." Are you familiar with**
7 **the WAP?**

8 A. Yes.

9 **Q. What is the WAP?**

10 A. It is the Wildlife Action Plan (WAP) for the state of Rhode Island. In response to the U.S.
11 Congress, the original WAP was created in 2005 with a goal of keeping common species common, and
12 each state was required to have one. The 2015 WAP document is the mandated 10-year revision of this
13 plan presenting an effective strategy for wildlife conservation. The U.S. Fish and Wildlife Service offers
14 State Wildlife Grants for land acquisition and protection only to states with up-to-date WAPs. The goal
15 of this document is to provide direction of wildlife conservation efforts for the next decade. It
16 represents a vision and a strategy for conservation of wildlife in the state.

17 The WAP was assembled through a partnership between The Nature Conservancy and Rhode
18 Island Department of Environmental Management ("DEM") with the help of over 150 scientists from
19 countless organizations and academic Institutions. It presents the most current information available on
20 Rhode Island's wildlife and on the habitats and natural systems that support them. The WAP also
21 includes detailed information on the various threats to wildlife that have been identified through a
22 rigorous process to determine species of greatest conservation need in the state and outline strategies
23 for addressing those threats.

24 **Q. Please explain how you came to be familiar with the WAP.**

1 A. In July 2011, The Conservancy entered in to a cooperative agreement with RI Department of
2 Environment Management (RIDEM) to oversee the rewriting of this document. I was tasked with
3 leading this project on behalf of The Conservancy. In this role, I served on the WAP Steering Committee
4 and the Bird Team from 2011 until its completion in the spring of 2015.

5 **Q. Mr. Ringler discusses the WAP on pages 13-14 of his Pre-Filed Direct Testimony. Is there**
6 **anything in Mr. Ringler's discussion of the WAP to which you would like to respond?**

7 A. Yes. Mr. Ringler refers to the overall acreage of unfragmented forest blocks of 500 acres or
8 more in northwestern Rhode Island and compares the footprint of the power plant to this broader
9 acreage. In making this comparison, Mr. Ringler creates false equivalencies and ignores important
10 context.

11 **Q. What do you mean when you say that Mr. Ringler creates false equivalencies?**

12 A. In his discussion reducing the site of the proposed power plant to a percentage of overall
13 unfragmented forest land in northwestern Rhode Island, Mr. Ringler implies that the site of the
14 proposed power plant is equivalent to the broader landscape. This is false – in fact, it is the existence of
15 these unfragmented blocks of forest land that make the proposed Invenergy site so ecologically
16 valuable.

17 To break it down, there is no disputing that there are thousands of acres of unfragmented forest
18 lands in northwestern Rhode Island, and the plant's footprint would be a small percentage of that
19 overall acreage of unfragmented forest land. However, despite Mr. Ringler's myopic focus on these 35
20 acres, it is important to note that not all tracts of forest have the same ecological values. In fact, the very
21 existence of this relatively small site in the midst of broader undeveloped forest tracts is what makes the
22 site of Invenergy's proposed site so important: it is a pinch point that maintains the essential
23 connectivity in what is otherwise an ecologically connected landscape. A pinch point is by definition

1 small in comparison to a broader landscape – but, ecologically speaking, its importance is very high
2 relative to its small size.

3 **Q. And what do you mean when you say that Mr. Ringler ignores important context?**

4 A. Essentially the same thing: the site is ecologically valuable because it is a relatively small tract
5 that, due to its location, is vital to the connectivity between larger blocks of presently unfragmented
6 forest.

7 **Q. And would you please remind us why it is important to maintain connectivity at the site of the
8 proposed power plant?**

9 A. Habitat connectivity is an important component of resilient natural systems. Connectivity is
10 critical for species movement as they disperse from their birth sites to breeding sites. It is also critical for
11 movement or dispersal between breeding sites, allowing the flow of genetic material through
12 populations. Connected landscapes are more resilient to disturbance by allowing recolonization after
13 disturbance events.

14 **CIRCUITSCAPE**

15 **Q. Mr. Ringler also discusses Circuitscape. Are you familiar with Circuitscape?**

16 A. Yes

17 **Q. You described Circuitscape on pages 13-14 of your Pre-Filed Direct Testimony. Would you
18 please remind us, briefly, what Circuitscape is?**

19 A. Circuitscape is a connectivity analysis software package which borrows algorithms from
20 electronic circuit theory to predict patterns of movement, gene flow, and genetic differentiation among
21 plant and animal populations in heterogeneous landscapes. Circuit theory considers effects of all
22 possible pathways across a landscape simultaneously.

23 **Q. Was Circuitscape developed in response to the Invenergy proposal?**

1 A. No, it was developed independently years before the public or The Conservancy was aware of
2 Invenergy's proposal to build a power plant in Burrillville. The Conservancy has conducted analyses
3 using Circuitscape as part of its comprehensive regional assessment of ecological resilience, including
4 analyses that identified the site of the proposed Invenergy plant as an ecologically important area –
5 analyses that were not conducted in response to the Invenergy proposal.

6 **Q. Why is it important that these Circuitscape analyses were not conducted in response to the**
7 **Invenergy proposal?**

8 A. The Conservancy uses Circuitscape because we work to identify ecologically important
9 landscape corridors. We do not use it with a political agenda. As I wrote on page 6 of my Pre-Filed
10 Direct Testimony, it is very rare for The Conservancy to take a position on a proposed development
11 project in Rhode Island. We felt compelled to oppose this proposed power plant, however, because the
12 very tools that we use in the ordinary course of business show plainly that the power plant would create
13 tremendous ecological harm. Although my testimony in this case is on behalf of the Conservation Law
14 Foundation, I would not be providing testimony if this project did not conflict directly with The
15 Conservancy's mission of working to protect ecologically important lands and waters for nature and
16 people.

17 **Q. On pages 15-16 of his Pre-Filed Direct Testimony, Mr. Ringler describes how he used**
18 **Circuitscape to draw his own conclusions about the proposed power plant's impacts on ecological**
19 **connectivity. Is there anything in this section of Mr. Ringler's testimony to which you would like to**
20 **respond?**

21 A. Yes. There are several major problems with Mr. Ringler's analysis. First, Mr. Ringler uses criteria
22 that are irrelevant in the context of the proposed power plant, specifically Resilience, Landscape
23 Diversity, and "two geophysical settings." Second, Mr. Ringler wrongly attempts to use the WAP to
24 discredit Circuitscape connectivity analysis. Third, Mr. Ringler wrongly identifies a location that he calls

1 both “an apparent break in flow” and “a pinch point,” terms that are both mutually exclusive and that
2 are used incorrectly in this context. Overall, this section of Mr. Ringler’s testimony is one of the areas
3 where, as I said above, his testimony is both untrue and irrelevant.

4 **Q. Let’s walk through those responses one by one. You say that “Resilience” is an irrelevant**
5 **criterion in this context. Would you please explain what you mean?**

6 A. “Resilience” in this context refers to the degree to which a landscape is able to maintain a
7 diverse and functioning ecosystem in the face of disturbance or change. This is measured in this case
8 with an index that considers a site’s local connectedness and landscape diversity. These measures, while
9 important, don’t capture the value of landscape-scale connectivity. The unique ecological value of this
10 site comes primarily from its location relative to these landscape-scale corridors as illustrated in the
11 connectivity maps provided with my previous testimony. The site may not be highly diverse but it is well
12 connected locally and, more relevant to our testimony, is a critical landscape-scale connectivity pinch
13 point.

14 **Q. You also say that “Landscape Diversity” is an irrelevant criterion in this context. Would you**
15 **please explain what you mean?**

16 A. Landscape diversity is a measure of the variety of local microclimates. A diverse landscape
17 provides more opportunity for species to find suitable habitats in response to larger climactic change.
18 This is a valuable indicator when evaluating the value of a given landscape for conservation. It is just one
19 measure, though, and is not relevant when discussing the value of this site as a landscape-scale
20 connectivity corridor. The “Landscape Diversity” measure is irrelevant as an argument against the value
21 of the Invenergy site as a landscape connectivity corridor.

22 **Q. Finally, you refer to “two geophysical settings” and say that those settings, too, are irrelevant**
23 **in this context. Would you please explain what you mean?**

1 A. The geophysical settings data was used as an intermediate step in the resilience analysis. Its
2 value is in comparing similar geophysical landscapes across the region as a way of normalizing the final
3 data. It is not relevant to understanding of the ecological value of this tract of land.

4 **Q. When Mr. Ringler discusses “Resilience,” “Landscape Diversity,” and “two geophysical**
5 **settings,” he also discusses “Local Connectedness.” Is “Local Connectedness” a relevant criterion in**
6 **this context?**

7 A. Yes, “Local Connectedness” has some value. As I stated previously, local connectedness is one
8 factor used to measure a site’s resilience. Large, unfragmented tracts of natural land such as forest will
9 score more highly than those that are broken by development. This analysis is useful in identifying large
10 tracts of resilient forest habitat in much the same way as the “unfragmented natural blocks” analysis
11 from the WAP. This type of analysis is local but will often overlap significantly with landscape-scale
12 connectivity analyses since they both consider the connectedness of natural land. The Invenergy site
13 scores “slightly above average” and “above average” in terms of local connectedness. Importantly, this
14 locally connected block of forest is located in a regionally significant connectivity corridor. The
15 identification of this corridor requires a regional scale analysis beyond this local measure.

16 **Q. Coming to your next point, you say that Mr. Ringler wrongly tries to use the WAP to discredit**
17 **Circuitscape. Would you please explain what you mean by that?**

18 A. Mr. Ringler notes on pages 15-16 that Circuitscape excludes a broad swath of forested land in
19 northwestern Rhode Island as an area of high connected flow, despite that land’s apparent similarity to
20 the proposed power plant site based on WAP classifications. He writes that “[b]ased on the WAP
21 classification, there is no difference between the classification” of several areas, including approximately
22 2,000 acres of unfragmented forest blocks west of the proposed power plant site, the George
23 Washington Management Area to the south, and additional unfragmented forest blocks north of the
24 proposed power plant site. This is just wrong.

1 **Q. How is Mr. Ringler's testimony on regarding these lands wrong?**

2 A. The WAP does not consider a block's location on the landscape – it was intentionally written to
3 be inclusive. Just because two blocks are both unfragmented forest, that does not mean that both
4 blocks are of equal value in terms of ecological flow and habitat connectivity. Ecological flow is a more
5 specific, complementary issue. So when Mr. Ringler says that “there is no difference” between the
6 areas he identifies, that creates the misimpression that these blocks of unfragmented forest land are of
7 equal value in terms of ecological flow. They are not.

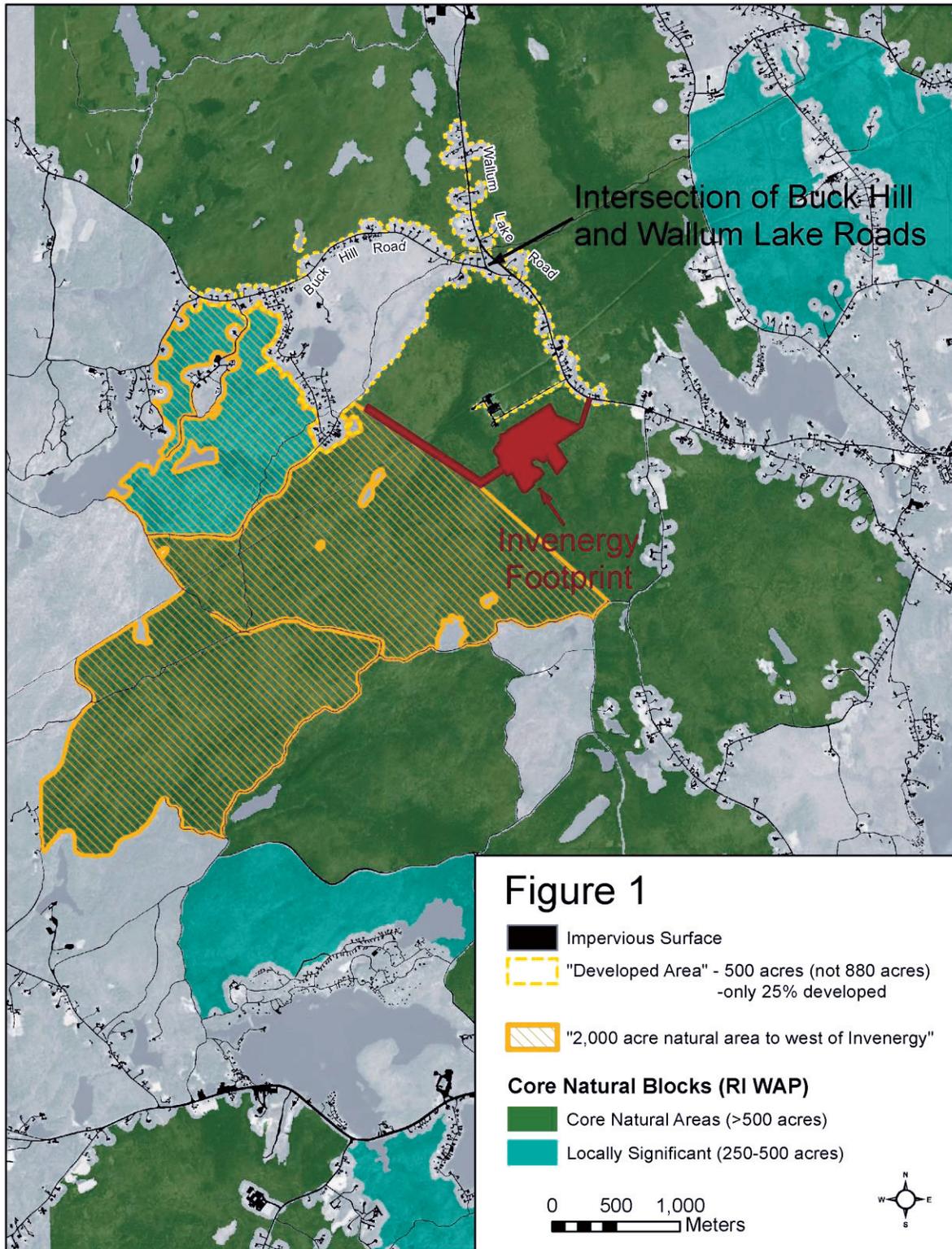
8 More specifically, the additional blocks that Mr. Ringler refers to include a secondary tier
9 unfragmented natural block. They may be important, but they are not as important as the location of
10 the proposed power plant.

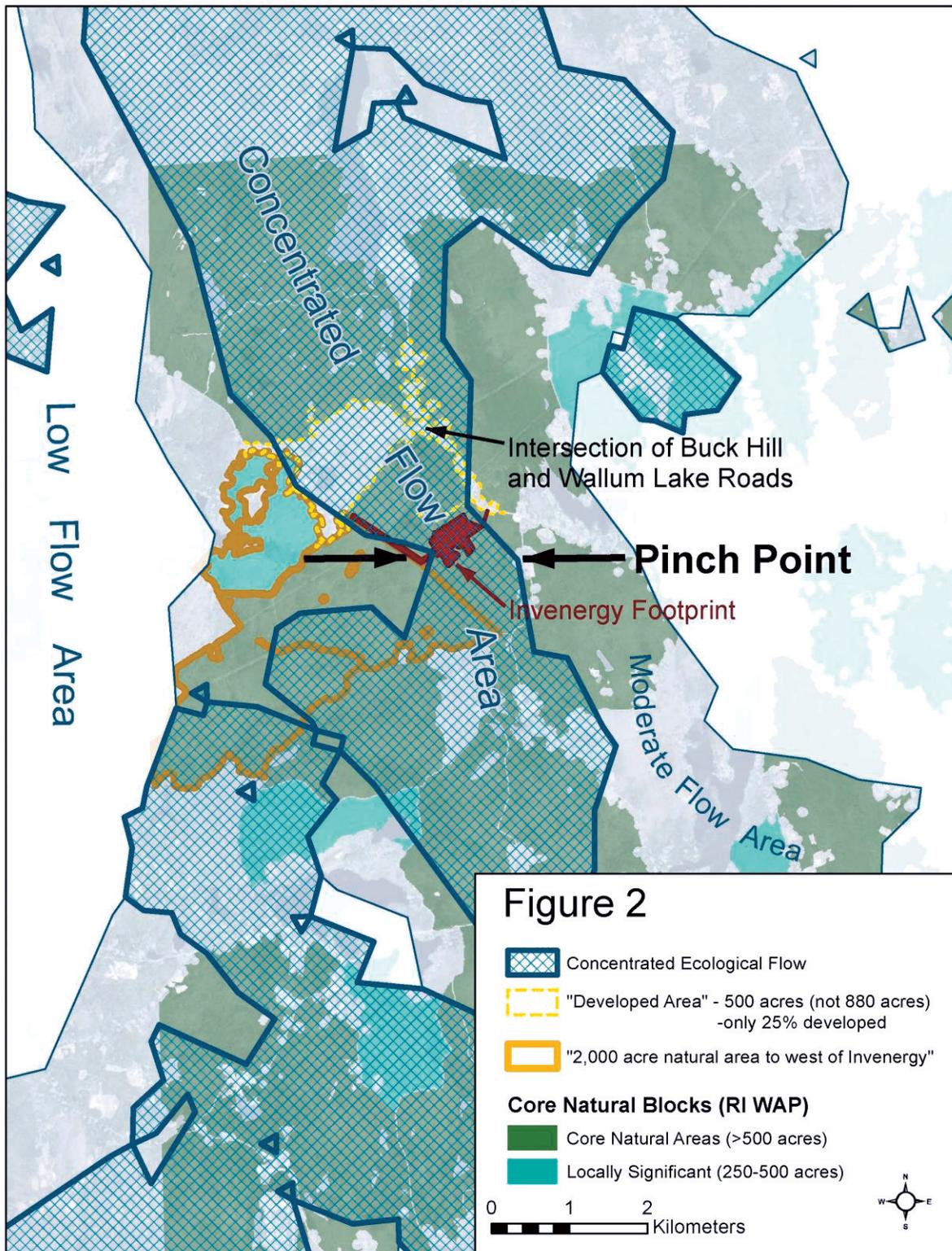
11 **Q. Have you prepared figures to help illustrate the problems with Mr. Ringler's testimony?**

12 A. I have.

13 **Q. What are those figures?**

14 A. They are Figures 1 and 2:





1 **Q. What does Figure 1 show?**

2 A. The Conservancy made an honest effort to understand and interpret Mr. Ringler's rebuttal
3 testimony. This figure maps the areas and locations described by Mr. Ringler.

4 **Q. What does Figure 1 illustrate with regard to the land identified by Mr. Ringler as "developed
5 area?"**

6 A. The area outlined in red is a 500 acre tract of land that includes forest and development. Mr.
7 Ringler describes this as "880 acres of existing anthropological disturbance." Besides only being 500
8 acres, this area is mostly natural, with only 25% in development.

9 **Q. What does Figure 1 illustrate with regard to the land identified by Mr. Ringler as
10 approximately 2,000 acres of unfragmented forest blocks west of the proposed power plant site?**

11 A. Mr. Ringler claims that there is "no difference" between this 2,000 acre area and the large
12 forested blocks to the south and west. But this area is in fact different in at least two important ways.
13 First, this area includes a significantly smaller (394 acre) block with a higher degree of fragmentation.
14 Second, a block's position in the landscape is an important factor when making such a comparison. The
15 regional Circuitscape analysis done as part of "Regional and Connected Landscapes for Terrestrial
16 Conservation, 2016," included in my Pre-Filed Direct Testimony on page 32, lines 23-26 as Link 2,
17 considered these spatial relationships and identified the eastern corridor, that includes the proposed
18 Invenergy site, as a better alternative.

19 **Q. Was the document you just referenced, "Regional and Connected Landscapes for Terrestrial
20 Conservation, 2016," prepared in response to the Invenergy proposal?**

21 A. No, it was not. The document was developed by a team of sixty scientists led by The
22 Conservancy, and it assessed and identified ecologically important conservation opportunities along the
23 entire east coast of the United States and Canada.

24 **Q. Figure 1 refers to "impervious surface" – what is impervious surface?**

1 A. Impervious surface refers to land that is impervious to infiltration by water. These areas are
2 predominately paved or otherwise hardened surfaces almost exclusively associated with anthropogenic
3 disturbance. It is included on this map to provide a clearer picture of the patterns of development found
4 in the area in question.

5 **Q. Figure 1 also refers to “core natural areas” and “locally significant” areas. Would you please**
6 **explain those two terms?**

7 A. The “core natural areas” are unfragmented natural blocks greater than 500 acres. These blocks
8 capture the largest and least fragmented examples of forest habitat. These blocks offer the best
9 opportunity to maintain resilient ecological systems. The “locally significant” blocks are between 250
10 and 500 acres. These blocks are intended as possible links between the larger core natural area blocks in
11 situations where they are the only alternative. They also may be important conservation targets in more
12 developed areas such as coastal and urban landscapes that do not have larger tracts of natural land.

13 **Q. Finally, on Figure 1 there is a point on the map labeled “pinch point.” What is the significance**
14 **of that point?**

15 A. Mr. Ringler refers to the intersection of Buck Hill and Wallum Lake roads as a “pinch point,” and
16 Figure 1 therefore identifies the intersection with the term “pinch point.” As I will discuss in more detail
17 below, however, a pinch point describes a connection that is narrowed by surrounding development. It
18 does not refer to an impediment such as the location of development described here.

19 **Q. Altogether, then, what does Figure 1 show with respect to Mr. Ringler’s testimony?**

20 A. The figure shows that the areas of the forest to the west of the site are not “the same” as the
21 forests to the east that include the Invenergy site. The figure also highlights the flaws in Mr. Ringler’s
22 description of the site. The developed area to the north is mischaracterized in size and quality. The
23 description of the “pinch point” highlights either a misunderstanding or a misrepresentation of the term
24 and concept.

1 **Q. Is there anything else about Mr. Ringler's testimony comparing the WAP and Circuitscape that**
2 **you disagree with?**

3 A. Yes. On page 16 of his testimony, Mr. Ringler identifies "approximately 880 acres of existing
4 anthropogenic disturbance" and concludes that "[w]hen the 880-acre area of disturbance is compared
5 to those areas identified as having high Concentrated Connectivity in the TNC regional Mapping Tool
6 [sic], an apparent break in flow already exists, with a pinch point being where Buck Hill and Wallum Lake
7 Roads intersect." I strongly disagree with this conclusion.

8 **Q. Would you please explain why you disagree with that conclusion?**

9 A. For starters, I disagree with Mr. Ringler's assessment that the area he identifies – an area
10 "between Buck Hill Road (north), Wallum Lake Road (east) and the National Grid Utility Corridor (south)"
11 – is one of "existing anthropogenic disturbance" that disrupts ecological flow. That area includes a
12 significant amount of undeveloped forestland and, while it might not be perfect, has been identified by
13 objective analysis as the best available corridor for wildlife in the northwest forest landscape – a
14 landscape that is of great significance regionally as I discussed in my Pre-Filed Direct Testimony.

15 **Q. If there is some "anthropogenic disturbance" in this area, how can it be the best available**
16 **corridor for wildlife?**

17 A. There are no places, particularly in an area such as Southern New England, that do not have
18 some degree of "anthropogenic disturbance." The presence of anthropogenic disturbance, however,
19 does not imply the absence of ecological value and connectivity. As illustrated by my earlier testimony,
20 this landscape is relatively connected and unfragmented when compared to other near coast
21 landscapes. This site in particular has been identified by multiple agencies and analyses as the best
22 available. No claims are made that the area is free from disturbance, just that it is the best available
23 corridor and any further disturbance would have a significant negative impact to its ecological function.

24 **Q. Is there anything else in this portion of Mr. Ringler's testimony with which you disagree?**

1 A. Yes. That brings me to my third point above: Mr. Ringler's assessments on page 16 that "an
2 apparent break in flow already exists" and that there is "a pinch point ... where Buck Hill and Wallum
3 Lake Roads intersect."

4 **Q. Let's take those one at a time. Why do you disagree with Mr. Ringler that an apparent break
5 in flow already exists?**

6 A. This "apparent break in flow" is still the most natural connection between some of the largest
7 natural forests in this landscape. The developments that make up this area were considered as inputs in
8 the Circuitscape model that highlighted this corridor. The model still indicated a high degree of
9 concentrated ecological flow. It is still the best connecting corridor and is vital to the area's ecological
10 resilience.

11 **Q. And why do you disagree with Mr. Ringler that there is a pinch point at the intersection of
12 Buck Hill and Wallum Lake Roads?**

13 A. As mentioned earlier, and illustrated in Figure 2, a pinch point is an area of flow that is confined
14 to a narrow path. It is not an impediment to flow such as the described intersection. A break in flow and
15 a pinch point are mutually exclusive.

16 **Q. What does Figure 2 show?**

17 A. Figure 2 shows the elements of Figure 1 but also includes an overlay showing the concentrated,
18 moderate, and low ecological flow areas. A narrow section of concentrated flow in the vicinity of the
19 proposed Invenergy development site is labelled to show the nature of this area as a "pinch point" in
20 ecological flow. This is in contrast to the developed area to the north that Mr. Ringler incorrectly
21 referred to as a "pinch point." This figure is shown at a slightly larger scale than Figure 1 to better
22 illustrate the relationship between the regional flow of the Circuitscape and the more local mapping of
23 unfragmented blocks. These complementary analyses highlight the unique ecological value of the
24 proposed Invenergy development site as a connecting feature on the landscape.

1 **Q. Would you please explain what you mean above when you say that a “break in flow” and a**
2 **“pinch point” are mutually exclusive?**

3 A. It is like the difference between a river bank and a dam. The river banks may narrow and restrict
4 the flow of water but the effect of this restriction is to concentrate the flow and make the water deeper
5 or faster. A dam is a restriction in flow that slows or stops the waters movement. In this analogy, the
6 dam represents a “break in flow” while the narrowing river banks represent a “pinch point.” The two
7 concepts are fundamentally different.

8 **HABITAT CONNECTIVITY**

9 **Q. On page 18 of his Pre-Filed Direct Testimony, Mr. Ringler expresses an opinion regarding the**
10 **impact of the proposed Invenergy plant on “habitat fragmentation and regional connectivity.” Have**
11 **you reviewed that opinion?**

12 A. Yes, I have.

13 **Q. Do you agree with Mr. Ringler’s opinion?**

14 A. No, I strongly disagree with Mr. Ringler’s opinion.

15 **Q. Why do you disagree with Mr. Ringler’s opinion?**

16 A. First, the claimed basis for Mr. Ringler’s opinion is not scientifically valid. Mr. Ringler begins by
17 reducing the footprint of the proposed power plant to a percentage of the overall acreage of
18 unfragmented forest blocks of 500 acres or more in Burrillville specifically and in northwestern Rhode
19 Island more broadly. The resulting percentage is essentially a rhetorical figure with no scientific value.

20 Mr. Ringler next points to a supposed break in flow near the intersection of Buck Hill and
21 Wallum Lake Roads – an area that elsewhere he calls a “pinch point.” I have already discussed above
22 why this is wrong both as an inappropriate use of the term and as a characterization of the connectivity.

23 Following these two claims – the acreage percentage and the purported (incorrect) existence of
24 a break in flow near the power plant site – Mr. Ringler says “therefore, the project would not create a

1 barrier for wildlife species across the landscape.” This is nonsensical. There is no way Mr. Ringler’s
2 conclusion could follow from his analysis.

3 Consider it this way. Let’s say I’m in charge of the Department of Transportation and I want to
4 build a highway. I carefully plan a route, and unfortunately there’s a house site in the path that makes
5 the most sense for the highway. I approach the homeowner to attempt to purchase the house site.
6 Would it make any sense for the homeowner to make this argument?: “My property is only a half acre,
7 while your highway will end up covering 1,000 acres of land; also, there’s a large boulder a few hundred
8 feet away from my house. Therefore you don’t need my property for your highway.” The conclusion
9 simply doesn’t follow from the premise.

10 **Q. What would an appropriate analysis have been?**

11 A. I presented an appropriate analysis in my Pre-Filed Direct Testimony, where I used the scientific
12 tool Circuitscape to focus on the value of land in northwestern Rhode Island through the lens of regional
13 ecological flow. This analysis was further complemented with the consideration of local data, including
14 unfragmented natural blocks and existing conservation land. Using that analysis, I determined that the
15 site of the proposed power plant is of unique ecological value.

16 I would note further that DEM in its Advisory Opinion to the Energy Facility Siting Board applied
17 a similar analysis to mine and came to the same conclusion I did. DEM reviewed many years of objective
18 analysis pre-dating the Invenenergy proposal and concluded that the proposed power plant would “inhibit
19 DEM’s attempts to enhance landscape resiliency to mitigate the loss of biodiversity through habitat
20 fragmentation and climate change.”¹ DEM specifically reaffirmed this opinion in its Supplemental
21 Advisory Opinion.² In fact, DEM went further in its Supplemental Advisory Opinion, noting that

¹ *Department of Environmental Management’s Advisory Opinion to the Energy Facility Siting Board Pursuant to the Notice of Designation Issued March 10, 2016 and as Amended on July 1, 2016*, at 12 (Sept. 12, 2016).

² *Department of Environmental Management’s Supplemental Advisory Opinion to the Energy Facility Siting Board Pursuant to the Notice of Designation Issued April 13, 2017*, at 4 (Aug. 15, 2017).

1 “ecologists rely on landscape-level assessments,” affirming the importance of “landscape connectivity
2 assessments” such as “The Nature Conservancy’s flow modeling,” and concluding that “[a]ll of these
3 landscape-level assessments identify the subject parcel as being of high-value for wildlife.”³

4 Finally, DEM acknowledges that its “permitting processes ... do not address forest loss and
5 fragmentation,” calling on the Energy Facility Siting Board to exercise its independent judgment on this
6 important issue.⁴ I agree with DEM and submit that the only scientifically sound conclusion on the
7 question of habitat connectivity is that the proposed power plant would cause unacceptable harm to
8 the environment by destroying a wildlife corridor that is key to ecological flow locally and even
9 regionally.

10 CONCLUSION

11 **Q. Taking into account your original analysis, Mr. Ringler’s testimony, DEM’s Advisory Opinion
12 and Supplemental Advisory Opinion, and your additional testimony above, what is your opinion to a
13 reasonable degree of scientific certainty of the impacts of the proposed Invenergy plant on habitat
14 connectivity?**

15 A. I stand by the conclusion originally presented in my Pre-Filed Direct Testimony: building the
16 Invenergy plant on its proposed site would have severe negative impacts on a uniquely important and
17 irreplaceable wildlife corridor necessary for maintaining ecological flow. For this reason, in my opinion
18 as a wildlife and conservation biologist, the power plant would cause unacceptable harm to the
19 environment.

20 **Q. Does that conclude your testimony?**

21 A. Yes.

³ *Id.* at 12.

⁴ *Id.* at 11.