

**EXHIBIT NO. ___(JAP-1T)
DOCKET NO. UE-14___
2014 PSE COST OF SERVICE AND
RATE DESIGN FILING
WITNESS: JON A. PILIARIS**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**In the Matter of the Petition of
PUGET SOUND ENERGY, INC.
To Update Methodologies Used To
Allocate Electric Cost of Service and
For Electric Rate Design Purposes**

Docket No. UE-14___

**PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF
JON A. PILIARIS
ON BEHALF OF PUGET SOUND ENERGY, INC.**

JULY 1, 2014

PUGET SOUND ENERGY, INC.

**PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF
JON A. PILIARIS**

CONTENTS

I. INTRODUCTION1

II. COST OF SERVICE AND RATE DESIGN COLLABORATIVE3

III. PROPOSED CHANGES TO COST ALLOCATION6

IV. CONCLUSION.....19

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

PUGET SOUND ENERGY, INC.

**PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF
JON A. PILIARIS**

I. INTRODUCTION

Q. Please state your name, business address, and present position with Puget Sound Energy.

A. My name is Jon A. Piliaris. I am employed as Manager, Pricing and Cost of Service with Puget Sound Energy, Inc. (“PSE” or the “Company”). My business address is 10885 NE Fourth Street, Bellevue, WA 98009-9734.

Q. Have you prepared an exhibit describing your education, relevant employment experience and other professional qualifications?

A. Yes, I have. It is Exhibit No. ____ (JAP-2).

Q. What is the purpose of your testimony?

A. My testimony presents PSE’s proposal to update the methodologies used to allocate its electric cost of service and recover these costs through its rate design for electric service.

1 **Q. Please summarize PSE’s proposal to modify its existing electric cost of**
2 **service and rate design methodologies.**

3 A. There are three main elements to PSE’s proposals in this filing.

4 First, PSE proposes to update the inputs and assumptions used to classify its
5 electric production and transmission costs (i.e., as between those that are demand-
6 related or energy-related) under its “peak credit” methodology. Specifically, PSE
7 proposes to update its peak credit methodology to reflect: (1) assumptions used in
8 PSE’s 2013 integrated resource plan (“IRP”); (2) more recent projections of
9 natural gas prices; (3) reasonable projections of carbon costs; (4) capacity factors
10 reflective of PSE’s baseload resource needs; and (5) its recently-approved rate of
11 return.

12 Second, PSE proposes to update the methodology used to allocate demand-related
13 production and transmission costs to be more consistent with the theory of cost
14 causation. Specifically, PSE proposes to allocate demand-related production and
15 transmission costs based on each rate classes’ contribution to PSE’s highest
16 monthly peak loads in the months of November through February, rather than
17 using their contributions to the top 75 hours of load in each year.

18 Finally, PSE proposes that the new peak credit results apply to the allocation of
19 production and transmission-related costs as filings are made to update rates to
20 recover these costs (or to provide credits). Moreover, to the extent that a decision
21 is reached in this docket prior to the final order in PSE’s recently filed power cost

1 only rate case (“PCORC”) in Docket No. UE-141141, PSE proposes that the
2 allocation factors approved in this filing be applied on a one-time basis to the
3 entire revenue requirement approved in the PCORC filing (i.e., not just the
4 revenue deficiency/surplus, as is customary for that filing).

5 **II. COST OF SERVICE AND RATE DESIGN**
6 **COLLABORATIVE**

7 **Q. Please describe the events that gave rise to this filing.**

8 A. On September 13, 2013, the parties to PSE’s 2013 PCORC¹ entered into a
9 Settlement Stipulation that resolved all issues in the case. One of the terms of the
10 Settlement Stipulation provided that the parties would participate in a
11 collaborative process to address cost of service, rate spread and rate design issues.

12 The Settlement Stipulation provided, in pertinent part:

13 If the Parties reach agreement in the collaborative, that agreement
14 can be implemented in PSE’s next PCORC, subject to Commission
15 approval. If the Parties do not reach agreement, PSE agrees to
16 initiate a docket no later than July 1, 2014, to address issues with
17 cost of service, rate spread, and rate design.²

¹ The parties to PSE’s 2013 PCORC were as follows: PSE, the Staff of the Washington Utilities and Transportation Commission (“Commission Staff”), the Public Counsel Section of the Washington Attorney General’s Office (“Public Counsel”), and the Industrial Customers of Northwest Utilities (“ICNU”).

² Order 06, Settlement Stipulation, ¶26.

1 The Settlement Stipulation was ultimately approved by the Commission and
2 incorporated by reference in Order 06.³

3 Following the Settlement Stipulation, parties have conducted a series of regular
4 collaborative meetings and conference calls since November 2013. PSE also has
5 provided information in response to informal data requests from parties.

6 **Q. Who participated in these collaborative meetings and conference calls?**

7 A. In addition to representatives from PSE, those in attendance at most, if not all,
8 meetings and conference calls included Commission Staff, Public Counsel, ICNU,
9 the NW Energy Coalition (“NWEC”), the Kroger Company (“Kroger”), and The
10 Energy Project.

11 **Q. How often did the participants meet to discuss cost of service and rate design
12 issues and what were the general topics covered?**

13 A. Table 1 below summarizes the topics discussed and the dates of scheduled
14 meetings. In addition, the parties corresponded frequently through emails and an
15 informal discovery process. Much of the focus of the meetings was around the
16 allocation of electric production and transmission costs, as well as certain issues
17 pertaining to residential electric rate design.

³ The 2013 PCORC Final Order Approving and Adopting Settlement Agreement resolved four consolidated dockets, as follows: Docket UE-130617, Order 06 (primary PCORC docket); Docket UE-130583, Order 02 (Mint Farm); Docket UE-131099, Order 02 (Electron); and Docket UE-131230, Order 02 (LSR II). For simplicity, this testimony refers to Order 06 in the PCORC, Docket UE-130617.

1
2

Table 1 – Date and Topics of Cost of Service and Rate Design Collaborative Meetings

Topic	Date
Overview of PSE’s Approach to Electric Cost of Service and Rate Design	November 21, 2013
Overview of Schedule 40	December 17, 2013
Peak Credit Methodology	January 27, 2014
Residential Basic Charge, Volumetric Blocks, and BPA Settlement	March 18, 2014
Peak Credit Methodology (cont.)	April 7, 2014
Discussion of status and path forward.	April 16, 2014

3

Q. Was a consensus reached on any of the issues discussed?

4

A. The parties did not reach consensus on what changes, if any, should be made to PSE’s electric cost of service, rate spread, and rate design. Accordingly, no changes were requested in PSE’s 2014 PCORC, filed May 23, 2014, and PSE is initiating this docket to address cost of service, rate spread and rate design issues that parties may wish to raise at this time.

5

6

7

8

9

Q. What issue is being addressed by PSE in its initiation of this docket?

10

A. PSE is proposing changes to the inputs and assumptions used to implement its “peak credit” methodology for allocating electric production and transmission costs.

11

12

1 **Q. Does this preclude parties from raising other issues in this docket?**

2 A. No, parties may raise their issues separately. That said, to provide context for the
3 existing manner in which PSE performs its cost of service and rate design
4 analyses, a copy of my prefiled direct testimony in PSE's 2011 general rate case
5 ("GRC"), Docket Nos. UE-111048 and UG-111049, is provided as Exhibit
6 No. ____ (JAP-3). The testimony provided in Exhibit No. ____ (JAP-3) presents a
7 summary of PSE's existing approach to allocating and recovering its electric
8 revenue requirement.

9 **III. PROPOSED CHANGES TO COST ALLOCATION**

10 **Q. Please describe how PSE currently classifies production and transmission**
11 **costs as being related to meeting energy or demand requirements in its**
12 **electric cost of service study.**

13 A. The Company uses the "peak credit" methodology to divide production costs into
14 those related to demand or energy. The peak credit methodology classifies PSE's
15 electric production costs, regardless of the type of generating resource, as either
16 energy-related or demand-related, based on the ratio of the levelized cost of a
17 proxy peaking generating resource to the cost of a proxy baseload generating
18 resource. The numerator and denominator of the ratio are expressed in dollars per
19 kilowatt-year (\$/kW-year).

1 PSE also uses the peak credit methodology to classify transmission costs. The
2 peak credit results are applied to transmission costs under the theory that
3 transmission lines are constructed to deliver the energy and capacity provided by
4 generating plant, and in the same proportion.

5 **Q. How does PSE currently allocate demand-related production and**
6 **transmission costs in its electric cost of service study?**

7 A. PSE currently allocates demand-related production and transmission costs based
8 on an average of hourly class loads that occurred coincident with the top 75
9 system hourly loads during the test year. This approach is tied to PSE's use of
10 estimated peak demands at 23°F for determining peak generation requirements in
11 a normal temperature year in its IRP. At the time of its last GRC, PSE reviewed
12 hourly temperature data over the preceding 15 years and determined that the
13 largest number of hours in any one year where the hourly temperature was 23°F
14 or colder was 75 hours.

15 **Q. How does PSE currently allocate energy-related production and**
16 **transmission costs in its electric cost of service study?**

17 A. PSE allocates energy-related production and transmission costs in proportion to
18 the contribution of each rate class to the utility's annual temperature-normalized
19 delivered load during the test year.

1 **Q. Does PSE propose departing from the “peak credit” methodology at this**
2 **time?**

3 A. No. At this time, PSE only proposes to refresh the inputs and assumptions used to
4 conduct this analysis. However, given the apparent support of other parties to
5 exploring alternatives to the peak credit methodology in the future, PSE is
6 amenable to continuing a dialogue with parties to explore more preferable
7 approaches to allocating PSE’s production and transmission costs in the future.

8 **Q. What are the key peak credit assumptions and inputs that PSE proposes to**
9 **update in this filing?**

10 A. These updates fall into five broad categories: (1) those related to the cost and
11 operational efficiency of the proxy generating resources assumed in PSE’s IRP,
12 (2) projections of natural gas prices, (3) projections of carbon costs, (4) the
13 assumed capacity factor of the proxy baseload resource; and (5) the authorized
14 rate of return.

15 **Q. Please discuss the proposed updates to the peak credit analysis related to the**
16 **IRP assumptions.**

17 A. For the updated peak credit analysis, PSE proposes to generally use assumptions
18 consistent with those found in its 2013 IRP, with a few exceptions as discussed
19 below. In contrast, PSE relied on the then-current assumptions from its 2011 IRP
20 to conduct the peak credit analysis in its 2011 GRC. The key IRP assumptions

1 that PSE uses for the peak credit analysis include those related to the capital costs,
2 fixed and variable operation and maintenance (“O&M”) costs, and the heat rates
3 of the proxy generating resources. Assumed planning margins and emission
4 costs, which will be discussed in more detail below, can also be found in PSE’s
5 2013 IRP.

6 **Q. Please discuss the updated natural gas cost projections used in the peak**
7 **credit analysis.**

8 A. While PSE’s 2013 IRP contains more recent projections of natural gas prices than
9 found in the 2011 IRP, even these more recent projections may be a bit stale
10 already, given the historic volatility in natural gas prices. As such, PSE proposes
11 to use more recent projections of natural gas prices using an approach consistent
12 with the one used in PSE’s 2013 IRP. Specifically, the proposed natural gas price
13 projections rely on: (i) the three-month average of forward prices as of May 30,
14 2014 for the period 2014 through 2019; (ii) the gas prices projected by Wood
15 Mac for the period 2020 through 2035; and (iii) a growth trend based on the
16 Wood Mac projections for the remainder of the 30-year projections. The gas
17 price forecast proposed for the peak credit analysis in this filing would be
18 consistent with the draft natural gas price projections to be used for PSE’s 2015
19 IRP.

1 **Q. Please discuss PSE's proposed carbon costs for the peak credit analysis.**

2 A. Carbon cost projections used in the peak credit analysis were a point of
3 contention in PSE's 2013 PCORC, and one of the issues raised at the subsequent
4 cost of service and rate design collaborative, as well as this proceeding. PSE's
5 2013 IRP offers a range of potential carbon costs and ascribes probabilistic
6 weightings to each of those projections. In updating its peak credit analysis, PSE
7 proposes to use a weighted average of the carbon cost projections from the 2013
8 IRP.⁴ While not as high as the level of projected carbon costs used for the peak
9 credit analysis in PSE's 2011 GRC and the 2013 PCORC, they still assign a
10 meaningful value to these costs for purposes of this analysis.

11 **Q. Please discuss the updated capacity factor assumed for the baseload resource**
12 **in the peak credit analysis.**

13 A. The capacity factor for the baseload resource assumed in the peak credit analysis
14 has been the subject of debate over the past few decades, where parties have
15 advocated capacity factors ranging from a level equivalent to PSE's system load
16 factor (typically 55-60 percent) to the full availability factor of the resource
17 (currently 97 percent as assumed in PSE's 2011 GRC). In this filing, PSE
18 proposes to compromise between these two ends of the spectrum and to assume
19 an 80 percent capacity factor.

⁴ The weighting in the IRP was one-third each to the Base, Low and High carbon cost projections.

1 **Q. How do you support the 80 percent capacity factor assumed for the proxy**
2 **baseload resource in the peak credit analysis?**

3 A. This assumed capacity factor is supported by the operation of PSE's existing
4 baseload resources. Traditionally, resources with the lowest variable costs are
5 used to support a utility's base loads, where more costly resources are run less
6 frequently in times of higher load. The generating resources in PSE's portfolio
7 that have the lowest variable costs include its hydro, wind and coal units. As
8 PSE's hydro and wind resources have operating limitations tied to the natural
9 resources available to produce the electricity, they are thus more intermittent in
10 nature. PSE's coal resources are the most apt point of comparison.⁵ These
11 resources have traditionally operated at capacity factors between 70-80 percent,
12 and as high as 88 percent in recent years. In PSE's 2014 PCORC, these resources
13 are assumed to collectively operate at around an 84 percent capacity factor during
14 the rate year. Based on these comparative data points, an 80 percent capacity
15 factor appears a reasonable assumption.⁶

16 **Q. How has the authorized rate of return changed in PSE's peak credit**
17 **analysis?**

18 A. PSE's authorized rate of return on rate base was most recently set in its 2013
19 expedited rate filing in Docket Nos. UE-130137 and UG-130138 ("2013 ERF").

⁵ This is referring to PSE's ownership share in the Colstrip generating facilities in Montana, not its purchases of transition coal power from Transalta's Centralia generating facility.

⁶ This 80 percent capacity factor was also used in PSE's 2001 GRC.

1 The rate of return authorized by the Commission in these dockets is 7.77 percent.
2 Consequently, PSE's peak credit analysis has been updated to reflect this more
3 recently-authorized rate of return.

4 **Q. What are the results of these updates on the classification of PSE's**
5 **production and transmission costs?**

6 A. In total, these proposed changes increase the percentage of costs considered to be
7 demand-related from the current level of 19 percent to 25 percent. The
8 calculation of the proposed results is provided in Exhibit No. ___(JAP-4).

9 **Q. You mentioned earlier that PSE also proposes to change the way demand-**
10 **related production and transmission costs are allocated. What is prompting**
11 **the proposed change?**

12 A. Since its 2006 GRC, demand-related production and transmission costs have been
13 allocated on the basis of customers' contribution to PSE's top 75 hours of load.⁷
14 As noted earlier, this approach was taken to align with the way PSE's generation
15 resource needs are identified in its IRP, where it has a planning standard to meet
16 peak loads at 23 degrees F. As stated earlier, at the time of PSE's 2011 GRC, for
17 the prior 15 years, the largest number of hours in any one year where the hourly
18 temperature was 23 degrees F or colder was 75 hours.

⁷ Prior to that time, PSE used the contribution to the top 200 hours of load.

1 More recently, as part of its review of the peak credit methodology, PSE analyzed
2 how well hourly temperatures align with hourly loads by evaluating the fraction
3 of the top 75 hours of load that were associated with the 75 coolest hours in each
4 year. Analyzing data for 2011, 2012 and 2013, the results show that less than 25
5 percent of the 75 highest hourly loads in each of these years occurred during the
6 75 coolest hours. In other words, and not surprisingly, hourly temperature alone
7 is a poor predictor of hourly load. Based on this evaluation, it is reasonable to
8 consider an alternative method for allocating demand-related production and
9 transmission costs.

10 **Q. What alternative is PSE proposing in this proceeding?**

11 A. Recognizing there is no perfect alternative, PSE proposes to use a coincident peak
12 (“CP”) allocator for demand-related production and transmission costs.
13 Specifically, PSE proposes to use a “4CP” allocation factor, where customers are
14 allocated demand-related production and transmission costs based on their
15 contribution to PSE’s monthly peak loads in its four mid-winter months (i.e.,
16 November through February).

17 **Q. Why is this approach a reasonable alternative to the existing approach of**
18 **using customers’ contribution to the highest 75 hours of load?**

19 A. First, as noted earlier, the current approach appears to be lacking in terms of
20 drawing a clear nexus between load and temperature.

1 Second, a 4CP allocation factor has ample precedents within the industry,
2 including the acceptance by the Federal Energy Regulatory Commission
3 (“FERC”). In fact, FERC ruled in the late 1990s that, while not perfect, a 4CP
4 allocation factor appeared reasonable for PSE’s system at that time. More
5 recently, PSE evaluated the applicability of the 4CP allocation factor to its system
6 using the tests relied upon by FERC to evaluate the appropriateness of various CP
7 allocation factors.⁸ Applying these tests to PSE’s more recent loads, the results
8 continue to support the conclusion that a 4CP allocation factor is reasonable for
9 PSE’s system.

10 Third, while not as theoretically pure as allocating on the basis of the contribution
11 to PSE’s single annual peak load, use of a 4CP allocator mitigates some of the
12 volatility in results that may be experienced if an annual peak allocator were used
13 instead.⁹

14 Finally, the use of 75 hours of load to allocate demand-related costs appears to
15 run counter to cost causation principles. Demand-related costs should be
16 allocated using measures of peak demand, rather than energy use. While it could
17 be argued that an allocation factor based on the top 75 hours of load is indicative

⁸ These are discussed on pages 63-65 of *A Guide to FERC Electric Utility Ratemaking* by Michael E. Small.

⁹ PSE also considered using a “2CP” allocator, which instead would focus only on the months of December and January. While a stronger case could be made for use of the 2CP allocator from a cost causation perspective, as with the 1CP allocator, it would also potentially lead to more volatility in results. Use of the 4CP allocator is more consistent with the Commission’s preference for gradualism when making methodological changes that impact customer rates.

1 of peak loads, the use of so many hours tends to blur the lines between demand
2 and energy.

3 **Q. What is the source of data used to develop the allocation factors used in this**
4 **filing?**

5 A. PSE's used its most recent load research study, which contains data for calendar
6 year 2012.

7 **Q. What are the results of these updates on how production and transmission-**
8 **related costs are allocated?**

9 A. The results are presented in Table 2 below. The percentages shown in the Table 2
10 reflect both the way production and transmission costs are classified between
11 demand and energy, as well as how the classified costs are allocated across rate
12 schedules. In general, customers with lower load factors will bear more of the
13 demand costs relative to customers with higher load factors.

1

Table 2 – Comparison of Existing and Updated Peak Credit Allocation Factors

Rate Schedules	2011 GRC Allocation Factors	Proposed Allocation Factors	Difference
Schedule 7	53.26%	54.70%	1.44%
Schedule 8/24	12.07%	12.34%	0.27%
Schedule 11/25	13.33%	12.58%	-0.75%
Schedule 12/26	8.97%	8.42%	-0.55%
Schedule 29	0.06%	0.06%	0.00%
Schedule 10/31	5.62%	5.41%	-0.21%
Schedule 35	0.02%	0.01%	-0.01%
Schedule 43	0.55%	0.45%	-0.10%
Schedule 40	3.29%	3.01%	-0.28%
Schedule 46	0.19%	0.15%	-0.04%
Schedule 49	2.23%	2.43%	0.20%
Schedules 51-59	0.37%	0.40%	0.03%
Firm Resale	0.04%	0.04%	0.00%

2

Q. What is the impact of these updates on the allocation of PSE’s actual power and transmission costs?

3

4

A. Table 3 below provides an indication of the impacts of PSE’s proposed changes to the peak credit analysis. Table 3 shows how the roughly \$1.3 billion revenue requirement proposed in PSE’s 2014 PCORC would be allocated across the customer classes.

5

6

7

1
2

Table 3 –Illustration of Impacts of Proposed Peak Credit Results by Class Using PSE’s 2014 Proposed PCORC Revenue Requirement

Rate Schedules	2011 GRC Allocation Factors	Proposed Allocation Factors	Difference	% Impact
Schedule 7	\$709,454,446	\$728,636,091	\$19,181,645	2.7%
Schedule 8/24	\$160,779,481	\$164,376,039	\$3,596,558	2.2%
Schedule 11/25	\$177,563,420	\$167,572,980	(\$9,990,440)	-5.6%
Schedule 12/26	\$119,485,662	\$112,159,340	(\$7,326,323)	-6.1%
Schedule 29	\$799,235	\$799,235	\$0	0.0%
Schedule 10/31	\$74,861,697	\$72,064,374	(\$2,797,323)	-3.7%
Schedule 35	\$266,412	\$133,206	(\$133,206)	-50.0%
Schedule 43	\$7,326,323	\$5,994,264	(\$1,332,059)	-18.2%
Schedule 40	\$43,824,730	\$40,094,966	(\$3,729,764)	-9%
Schedule 46	\$2,530,911	\$1,998,088	(\$532,823)	-21%
Schedule 49	\$29,704,908	\$32,369,026	\$2,664,117	9%
Schedules 51-59	\$4,928,617	\$5,328,235	\$399,618	8%
Firm Resale	\$532,823	\$532,823	\$0	0%
Total	\$1,332,058,667	\$1,332,058,667	\$0	0%

3
4
5
6
7
8
9

Q. How much of the impacts in Tables 2 and 3 are attributable to PSE’s proposal to allocate demand-related production and transmission costs using a 4CP allocator?

A. These impacts are summarized in Exhibit No. ____ (JAP-5). Residential, lighting and customers served under Schedule 49 are allocated more using the 4CP allocator. Irrigation and interruptible customers are not impacted. The remaining customers generally are allocated less under this approach.

1 **Q. Does the peak credit methodology apply to anything other than base**
2 **production and transmission costs?**

3 A. Yes. This methodology applies to the allocation of costs or credits in PSE's
4 PCORC filings (Schedule 95), production tax credits and treasury grants
5 (Schedule 95A), conservation expenses (Schedule 120) and renewable energy
6 credits (Schedule 137). PSE proposes that the peak credit results presented in this
7 filing be applied to the preceding rate schedules as PSE files to have them
8 updated. This would mean that the new peak credit results would not be applied
9 to most transmission costs. The allocation of these costs would be addressed in
10 PSE's next GRC.

11 **Q. How does the peak credit methodology normally apply in PSE's PCORC?**

12 A. The Power Cost Adjustment Mechanism ("PCA") normally requires that changes
13 in revenue requirements attributable to adjustments to the Power Cost Rate that
14 result from a PCORC be spread to customers based upon the peak credit
15 methodology used in computing the rate spread methodology in PSE's most
16 recent GRC. PSE's most recent GRC was in 2011.

17 **Q. Would PSE support applying its proposed peak credit results to the full**
18 **revenue requirement approved in its 2014 PCORC?**

19 A. Yes. While it is unclear how this might occur administratively, PSE would
20 support application of the proposed peak credit results in this filing to the full

1 revenue requirement approved by the Commission in PSE's 2014 PCORC. With
2 the current general rate case stay-out period,¹⁰ it is appropriate to update the
3 allocation of production and transmission costs, particularly as certain underlying
4 assumptions used in the peak credit analysis (e.g., natural gas prices and carbon
5 costs) have changed so markedly since PSE's 2011 GRC, rather than requiring
6 customers to wait nearly five years before having the opportunity to revisit the
7 allocation of production and transmission costs.

8 **Q. Does PSE propose any other changes to the manner in which it allocated its**
9 **electric revenue requirement?**

10 A. PSE has no other proposed change at this time. As noted earlier, an explanation
11 of the methodology used to allocate PSE's other costs is summarized in my
12 prefiled direct testimony in PSE's 2011 GRC, a copy of which is provided for
13 reference in Exhibit No. ____ (JAP-3).

14 **IV. CONCLUSION**

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

16 A. Yes, it does.

¹⁰ PSE filed its 2011 GRC in June 2011 and will not file another GRC any sooner than April 2015 (and no later than April 2016).