



WASHINGTON STATE
UNIVERSITY

To: Tracy Klein
Chair, Faculty Senate

Matt Hudelson, Ph.D.
Executive Secretary, Faculty Senate

From: Pablo Monsivais, Ph.D. MPH
Jonah Firestone, Ph.D.
Co-chairs, Research and Arts Committee

Date: September 25, 2024

RE: Institute for Northwest Energy Futures

On behalf of the Research and Arts Committee (RAC) members, we are writing to inform you that the Research and Arts Committee voted to approve the proposal to establish the Institute for Northwest Energy Futures. Please add this item to the Faculty Senate Agenda as a Discussion Item for the next meeting. Supporting documentation for this new institute request is attached in one PDF file and includes the proposal application, organization chart, budget statement, a supporting letter from the oversight authorities, and checklists completed by the RAC.

Sincerely,

Pablo Monsivais

Jonah Firestone

TO: Research and Arts Committee (RAC)

FROM: Elizabeth Chilton, Provost and Executive Vice President
Christopher Keane, Vice President for Research




DATE: March 8th, 2021

SUBJECT: Request for Center/Institute Interim Status

WSU Tri-Cities is pursuing an active role in growing WSU's energy and environment impact and identity in the mid-Columbia region. This region is located in a unique and rich energy setting that is critical to the Northwest's economic growth.

WSU Tri-Cities seeks to play a strategic role in helping define NW energy futures, including energy transition options. As such, WSU Tri-Cities is working towards establishing a new Institute: The Institute for Northwest Energy Futures (INEF). INEF will focus on the evolution of Northwest regional energy systems at multiple scales (e.g., grid, plant, manufacturing scales) through aligned research and education. This includes addressing integration of regional electricity generation derived from fossil, renewable, and nuclear energy resources, its storage and transmission and delivery. The Institute also addresses integration of energy systems with select industrial applications, including production of transportation fuels, chemicals, fertilizers, etc. This effort also necessarily addresses integration of energy systems and their components with other regional facets, including water, environment, agriculture, markets, policy, etc.

Recently, WSU Tri-Cities secured a lead gift from Bob Ferguson for an Endowed Distinguished Professorship in Energy Systems. The Distinguished Professorship will provide leadership in designing and developing the Institute to leverage WSU's many energy and environmental assets. In addition, the Distinguished Professor will be responsible for the development and execution of high-impact research agendas that contribute to regional strategies to navigate energy transitions - building on our strong nuclear energy programs to integrate energy resources and build collaborative problem-solving approaches to our regional ecosystem. Efforts will include developing multi-investigator programs, integrating multi-disciplinary laboratories, teaching, recruiting and supervising graduate and undergraduate students for relevant research, developing new integrated educational opportunities, recruiting new faculty members and reaching out to the broader community.

Our vision is that the INEF will serve as a virtual hub to convene, consult and coordinate a network of unparalleled assets residing in the Mid-Columbia region and give focus to understanding and shaping our diverse regional energy resources, in relationship to water resources, environment, agriculture, policy and economics.

Sandra Hayes and Michael Wolcott are the interim leaders of this institute, and they have put together the following 11 goals for the INEF:

- Provide cognizance of the current energy setting, trends and interdependencies
- Provide assessments of multi-scale level energy systems options (technical, economic, policy, environmental, etc.)
- Achieve recognition throughout community, State and greater NW as an energy "thought leader"
- Enhance relevant regional research and education partnerships
- Enhance the workforce pipeline
- Enhance integration of technology innovation

- Facilitate technology commercialization
- Provide a trusted public regional information portal
- Facilitate/Support enhancing economic development (e.g., through facilitating development of business ecosystems)
- Inform policy at the community, State, greater regional levels
- Synthesize, promote and apply capabilities within WSU and with its key regional partners

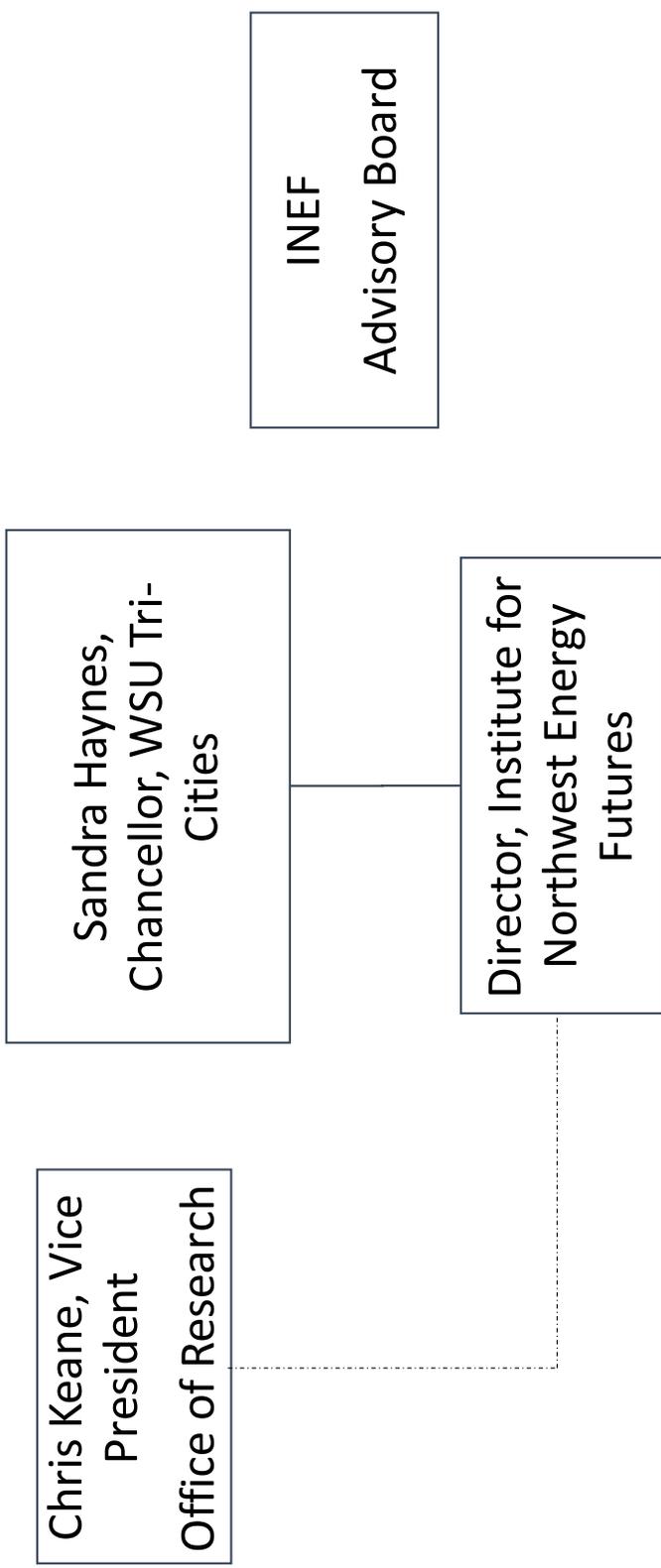
In order to continue this progress and to enhance their chances of receiving funding from center-type grant opportunities, the Office of the Provost and the Office of Research respectfully request the Faculty Senate, via the Research and Arts Committee, to grant interim status immediately to this institute. Once the interim status is approved, WSU Tri-Cities will submit a formal application for INEF to be designated a WSU institute. This application will be submitted by the end of April 2021.

We appreciate your prompt attention to this request as we would like to announce our acceptance of this gift via press release on March 17, 2021.

Thank you for your consideration.

Cc: Sandra Haynes, WSU Tri-Cities Chancellor
Michael P. Wolcott, WSU Regents Professor and Associate Vice President for Research

Institute for Northwest Energy Futures Organizational Chart



October 18, 2021

Estimated Costs for Institute for Northwest Energy Futures

Job Classification Title	Annual Salary	FTE Detail					
		FY24	FY25	FY26	FY27	FY28	FY29
Executive Director	272,000	1.00	1.00	1.00	1.00	1.00	1.00
Outreach Director	153,000	1.00	1.00	1.00	1.00	1.00	1.00
Administrative Support	59,000	1.00	1.00	1.00	1.00	1.00	1.00
Communications	73,000	1.00	1.00	1.00	1.00	1.00	1.00
Faculty (tenure-track)	162,000	-	7.00	7.00	7.00	7.00	7.00
Graduate Assistant	28,000	0.50	4.00	4.00	4.00	4.00	4.00
Maintenance & Custodial (M&O)	43,000	2.00	2.00	2.00	2.00	2.00	2.00
Grant accountant, Purchasing specialist	80,000		2.00	2.00	2.00	2.00	2.00
Total FTE		6.50	19.00	19.00	19.00	19.00	19.00

Object of Expenditure	Estimated Expenditures by Object					
	FY24	FY25	FY26	FY27	FY27	FY28
Salaries & Wages	657,000	2,049,000	2,049,000	2,049,000	2,049,000	2,049,000
Employee Benefits	236,000	818,000	818,000	818,000	818,000	818,000
Personal Serv Contr						
Goods and Services	1,851,000	1,890,000	1,890,000	1,890,000	166,000	166,000
Travel	40,000	180,000	180,000	180,000	180,000	180,000
Capital Outlays						
Inter Agency Fund Transfers						
Grants, Benefits Services						
Debt Service						
Interagency Reimbursement						
Intra-Agency Reimbursement						
Total Expenditures	2,784,000	4,937,000	4,937,000	4,937,000	3,213,000	3,213,000

Center/Institute/Collaborative Unit (CICU) Registration Form

Name of CICU

Institute for Northwest Energy Futures

The unit is proposed to be a:

- [Center or Institute](#)
- [Collaborative Unit](#)

Director of Center/Institute

LAST NAME

Haynes

FIRST NAME

Sandra

WSU ID #

11629617

E-MAIL

sandra.haynes@wsu.edu

PHONE #

5093727258

What is the desired unit email address to be used (if different from above)?

sandra.haynes@wsu.edu

Is this a new or existing WSU Center/Institute?

- New
- Existing

This C/I is a

- [College level C/I](#)
- [University level C/I](#)

Does this proposed unit have a current website address?

- Yes No

Please explain why not:

The website is under development.

What is your cost center number?

PENDING

Where will the unit be administratively housed (e.g., college(s), Office of Research)

Area/College/Campus 1

WASHINGTON ST UNIV - TRI-CITIES

Area/College/Campus 2

COLLEGE OF ENG VOILAND

Other participating areas/colleges/campuses (if applicable):

What is the **primary** mission of the proposed unit?

- [Research](#)
- [Teaching, Service, and/or Outreach](#)
- Both (uncommon – neither research nor teaching/service outreach is primary but both are equally weighted)

Preference for annual and five-year review due dates (please choose one):

- Annual report submission due August 1; five-year review submission due November 1
- Annual report submission due December 1; five-year review submission due March 1

Last 5-year Review Date (admin only)

month/day/year



Save Reporting Date

Mission statement, including specific goals (no more than a paragraph is expected):

The INEF will serve as a virtual hub to convene, consult and coordinate a network of unparalleled assets residing in the Mid-Columbia region and give focus to understanding and shaping our diverse regional energy resources, in relationship to water resources, environment, agriculture, policy and economics.

Brief description of major focus areas (100 words or less is expected):

The Institute for Northwest Energy Futures (INEF) will focus on the evolution of Northwest regional energy systems at multiple scales (e.g., grid, plant, manufacturing scales) through aligned research and education. This includes addressing integration of regional electricity generation derived from fossil, renewable, and nuclear energy resources, its storage and transmission and delivery. The Institute also addresses integration of energy systems with select industrial applications, including production of transportation fuels, chemicals, fertilizers, etc. This effort also necessarily addresses integration of energy systems (and their components) with other regional facets, including water, environment, agriculture, markets, policy, etc. The Institute for Northwest Energy

Futures (INEF) will focus on the evolution of Northwest regional energy systems at multiple scales (e.g., grid, plant, manufacturing scales) through aligned research and education. This includes addressing integration of regional electricity generation derived from fossil, renewable, and nuclear energy resources, its storage and transmission and delivery. The Institute also addresses integration of energy systems with select industrial applications, including production of transportation fuels, chemicals, fertilizers, etc. This effort also necessarily addresses integration of energy systems (and their components) with other regional facets, including water, environment, agriculture, markets, policy, etc. Specifically, the following areas will be addressed:

1. Life cycle assessment expertise to measure the environment impact of products, materials, products and processes. Examples include evaluating the indirect carbon footprint of various energy technologies from cradle to (recycled) cradle.
2. Techno-economic analysis to assess economic feasibility and risks of processes and products.
3. Energy data analytics using big data and machine learning techniques to predict energy demand, improve distribution, and understand customer consumption patterns.
4. Expertise to assess social impacts of action or inaction, or evaluating the intended and unintended social consequences in advance or in retrospect of planned interventions — such as policies, programs, plans and projects — to help bring about more sustainable and socially equitable results.

Keywords for major focus areas (list two to six):

Renewable Energy
Nuclear
Environmental Policy
Agriculture
Economic Policy

Value added by creation of the unit (consider all aspects of a land-grant university mission - no more than a paragraph is expected):

The INEF will leverage WSU's many energy and environmental assets to coordinate and lead high-impact research agendas that contribute to regional strategies to navigate energy transitions - building on our strong nuclear energy programs to integrate energy resources and build collaborative problem-solving approaches to our regional ecosystem. Efforts will include developing multi-investigator programs, integrating multi-disciplinary laboratories, teaching, recruiting and supervising graduate and undergraduate students for relevant research, developing new integrated educational opportunities, recruiting new faculty members and reaching out to the broader community.

Associated members and their department/school affiliation:

Sandra Haynes, WSU Tri Cities Chancellor
Noel Schulz, Inaugural Director, INEF, and Professor, VCEA
Mike Wolcott, Regents Professor, VCEA

Joshua Heyne, ME, SEAS, VCEA
Joseph Iannelli, ME, SEAS, VCEA
Scott Hudson, EE, SEAS, VCEA
Mohammed Osman, EE, SEAS, VCEA
Changki Mo, School of Mechanical and Materials Engineering, VCEA
Akram Hossain, Dept of Civil & Environmental Engineering, VCEA
Yonas Demissie, Dept of Civil & Environmental Engineering, VCEA
Xiao Zhang, Voiland School of Chemical Engineering, VCEA
Birgitte Ahring, Voiland School of Chemical Engineering, VCEA
Bin Yang, Biological Systems Engineering, CAHNRS
Hanwu Lei, Biological Systems Engineering, CAHNRS
Tom Collins, Dept of Horticulture, CAHNRS
Sarah Roley, School of the Environment, CAS and CAHNRS
Tanya Cheeke, School of Biological Sciences, CAS
Tim Baker, Dept of Finance and Management Science, CCB
Paul Skilton, Dept of Management, Information Systems and Entrepreneurship, CCB
Bob Bauman, History, CAS
Michael Mays, History, CAS

Criteria for membership:

Scholarship and/or teaching that relates to the INEF mission

Does this CICU have an Advisory Board?

Yes No

Are there external funding possibilities related to this CICU?

Yes No

Please list (be as specific as possible, e.g., listing example RFAs):

Private Philanthropy and Grants

Does a similar unit exist within WSU?

Yes
 No

Will the establishment of this unit impact the University Libraries beyond the impact already in place from the individual participating unit(s) (e.g., increased journal subscription needs)?

Yes
 No

List specific [metrics](#) for evaluation and review (must be coordinated with goals and agreed upon by oversight authority/authorities; it is important that there be common themes to metrics across C/Is):

Revenue:

Salaries & Wages 2,049,000
 Employee Benefits 818,000
 Goods and Services 1,851,000
 Travel 180,000

\$500,000 endowment.

Research and other grant support for institute activities conducted by the director and/or any new full-time faculty hired into the institute (affiliated faculty productivity will apply to their home department) as measured by:

A number of research is fully funded by grants.

Operational grants were applied for and granted.

It is estimated that the institute will be involved in the development of at least one-degree program in the first five years, undergraduate or graduate.

Expenses

See above

Teaching

Students taught

By year 5, the institute will have enrolled at least 20 undergraduate students per year in each related degree program developed or 3 graduate students per year in each related degree program developed.

Research and Creative Works

Productivity will be measured with the following metrics with goals indicated for the next five years. Given the collaborative nature of the institute, most activities will be collaborative, at least initially.

- Number of external awards received - 3.
- Number of grants submitted - 10
- Publications (limited to those directly related to the goals of the C/I) - 5
- Collaborative grants - 5
- Collaborative publications - 10

Visibility and Impact

- Media mentions - 15 per year
- External stakeholders - 15 corporate affiliates
- Presentations - 4 per year
- Outreach activities - 3 per year

Please upload the most recent organization chart (include leadership structure, faculty, staff, and advisory units as applicable; be sure to include oversight authority/authorities):

Org Chart: [10.15.21 INEF Organizational Chart Draft.pdf](#)

Budget overview, showing revenue (e.g., central funding, endowments, external funding, indirect cost recovery, projected income from service centers, tuition) and expenses (e.g., salaries, tuition, equipment purchase and upkeep, licenses, operational expenses, outreach activities), with evidence of approval at the appropriate level. If the C/I includes service centers, a **description** of services and revenue and expenses **analysis**

Budget Overview (Note: You cannot edit this without re-uploading a new file): [INEF Fiscal Detail FINAL.pdf](#)

Support letter(s) from proposed line(s) of authority (e.g., Dean, Chancellor, VPR, Provost). In addition to providing support and rationale for the overall establishment of the C/I, the oversight authority/authorities must address approval of the allocated budget, if applicable, in the support letter.

Support Letter: [INEF Interim Approval Final 03082021 \(1\).pdf](#)

Support Letter:

Support Letter:

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Last Modified By

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Oversight Authority/Authorities

Oversight Authority/Authorities Note: must be at the college Dean level or higher.

LAST NAME

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