|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. **Employee Information** | | | | |
| **Employee’s Name:** | Veronika Semchukova | | **Employee ID #:** | 24267 |
| **Review Period:** | 10.01.2023-09.30.2024 | | **Organization #:** | 5400 |
| 1. **Annual Evaluation Results:** Document performance including both results and behaviors. | | | | |
| *Current fiscal year major objectives agreed upon with line manager* | | *Current fiscal year accomplishments* | | |
|  | | Reference Ports Model Project:   * As lead analyst, characterized the technical readiness and operational suitability of 14 fuel cell off-road equipment types for cargo handling at ports. This was achieved by performing a literarature review, researching demonstrations at ports, comparing operational requirements with existing diesel operations, and assigning TRL to specific applications; * Developed a new Energy Demand Model (baseline diesel/gas/propane, and future electricity/hydrogen) for 4 selected ports. This entailed identifying power requirements for each equipment type, assimilating port data for model application, creating a rubric to assign each equipment type to an alternative powertrain, and calculating annual energy consumption. Estimated the requirements and capital costs for hydrogen refueling infrastructure by reconstructing the HD SAM Model and adapting to port data. And, evaluated alternative fuel bunkering requirements. * Designed a new method in how to choose 4 reference ports by surveying emission reports. Analyzed cargo and facility parameters to create a baseline of ports and created data requests. * Led meetings with Port Authority officials, and requested information for targeted implementation into an energy model. * Assigned Intern T.Tennyson specific research tasks and reviewed colleague’s work. * Coordinated with Researcher II K.Polemis and reviewed colleague’s work. * Collaborated with Researcher IV Z.Abdin on a weekly basis on all levels of the project. * Coordinated with PI B.Solanki to publish a technical report including 102 slides (published on 30 Sep 2024). The Report expanded NREL capabilities to cover fuel cell equipment at ports. * Received positive feedback from HFTO acknowledging the level of detail in the project (e.g., accessing the actual operating hours for each equipment type by port). | | |
|  | | Port Authority of New York and New Jersey:   * As lead analyst, conducted a literature review by compiling relevant research on hydrogen applications in airports under the client's jurisdiction (applications include fuel cell integration in microgrids, retrofit of existing large-scale CHP plant to co-fire hydrogen, ground support equipment, and air cargo vehicles) by considering technology readiness, economic, safety, environmental, and infrastructure factors. * As lead presenter, developed powerpoints and slide decks for presentations to the client on a monthly basis. * Responded to client’s changing preferences by expanding the research to include other decarbonization alternatives for comparison with hydrogen as appropriate. * Collaborated with Researcher IV Z.Abdin on a weekly basis on all levels of the project. * In developing the core of a Technical Report, created the initial draft of the main chapters, revised notations and comments, and made final revisions to the Technical Report of 63 pages (currently responding to reviewers’ and client’s comments) | | |
|  | | EPA:   * As lead analyst, presented updates to EPA officials * Compiled a review of existing tools, datasets, and selected reports that could aid in projecting future hydrogen fueling needs for heavy-duty vehicles. * Collaborated with Researcher IV Z.Abdin on a weekly basis on all levels of the project. | | |
|  | | Infrastructure Database:   * As lead analyst, met with senior colleagues on a monthly basis and compiled an initial version of a database with hydrogen production and infrastructure projects of 650 entries. | | |
| 1. **Line Manager’s Feedback** | | | | |
| Manager Feedback:   * Veronika has had an outstanding year with this being her first full year as a full-time employee. She took on leadership responsibilities on numerous projects and successfully delivered on results and ensured the clients were happy with their deliverables. * She has demonstrated ability to learn and adapt to fluid situations and is open/receptive to taking on new tasks and learning. These are key traits in early career researchers. * Her contributions have enabled us to break into the maritime and aviation spaces as these are key strategic areas for us to expand into. * I don’t have specific areas for you to develop in FY25, but public speaking is always a skill that can be improved as at some point in your career, you will be out in public speaking about your work. I’d like for you to continue to get more comfortable speaking so that we can have you represent NREL and our group at conferences, etc.   Zainul Feedback:   * Veronika has demonstrated expertise and leadership across various projects, including the Reference Ports Model, the Port Authority of New York and New Jersey (PANYNJ) initiative, and EPA efforts. Her work evaluating the technical readiness of hydrogen applications in maritime and airport settings, developing energy demand models, and engaging with stakeholders reflects strong analytical and collaborative skills. Notably, her ability to adapt to client preferences and deliver comprehensive reports, such as the technical report for PANYNJ and updates for the EPA, underscores her commitment to quality and stakeholder satisfaction. * To further enhance her contributions, Veronika should deepen her theoretical and practical understanding of the hydrogen value chain. This will enable her to address interconnected challenges across production, infrastructure, and application systems. Expanding her proficiency in Python and utilizing advanced tools such as ProFAST will support the development of complex models and improve data analysis. Additionally, refining her writing and analytical skills will enhance the clarity, precision, and impact of her technical reports and scholarly work. In order to ensure timely and high-quality project outcomes, proactive engagement with project leads will ensure effective time and resource management. These developmental steps will enable her to make more significant contributions and conduct more impactful research in the future.   Peer review, feedback, and suggestions to improve, if any:   * She has demonstrated following strengths in the project: Goal oriented, creative and innovative, good communication skills, team building and collaboration, and attention to details. * I have found Veronika to be a dependable colleague who shows great initiative when conducting research. During our work together in the PANYNJ project, she took the initiative in contacting NREL co-workers whose research overlapped with our project and had supporting data to assist us in our analysis. Furthermore and with proper guidance, I observed that she is diligent in completing analysis tasks on time before our presentations to the project stakeholder. Overall, I feel confident in delegating analysis tasks to her, knowing that she has delivered upon past project tasks. * I very much appreciate that Veronika primarily drove the research effort within the PANYNJ project. Her contributions in the project consisted of the primary research and analysis, presentation development, presentation delivery and report development. Her work on the project allowed myself bandwidth to focus on HyBlend as we collaborated during the first half of FY24. | | | | |
| 1. **Major Performance Objectives for Next Fiscal Year:** State major objectives for next year. | | | | |
| * Contribute to LADWP project, green corridor work, FTI microgrid project, and EPA efforts | | | | |
| * Publish another technical report or article if any of the projects above permit | | | | |
|  | | | | |
|  | | | | |
| 1. **Areas for Growth, Development and Challenge:** List skills, knowledge, or attributes that need to be developed or strengthened. | | | | |
| Skills: Strengthen coding skills in Python for implementation in projects and to effectively utilize tools such as ProFAST; enhance financial modeling skills using current NREL tools.  Knowledge: continue working with hydrogen integration in the maritime sector to broaden the knowledge base in the area.  Attributes: On two projects, we faced budget challenges. During the next fiscal year, I want to be more proactive with the PIs to manage the time allocations and establish weekly deliverable goals to ensure timely project execution. | | | | |
| 1. **Overall Performance Rating:** | | | | |
| |  |  | | --- | --- | | |  | | --- | | **Exceptional** |   **Enter the overall performance rating:** |  |  |  | | --- | --- | |  | Type “Yes” in the box to the left if a corrective action plan is required. | | | | | |
| **Performance Rating Definitions:** | | | | |
| **Needs improvement** – Employee does not meet the performance and/or behavior expectations, and/or demonstrates only a minimum level of proficiency in the competencies required in their job on a consistent basis. This rating also applied to an employee who may exhibit workplace behaviors which negatively impact the ability to be effective in their role, although goals may be achieved. Additional skill development, commitment, and/or change in behaviors are necessary. This rating describes the employee who may meet only the very minimum position requirements and/or behaviors and change is necessary. The evaluation should detail the changes necessary for improvement to ensure clear expectations are defined.  **Successfully meets or exceeds expectations** – Employee is currently successful in their role and consistently meets and may frequently exceed the high NREL performance expectations commensurate with their position within the laboratory. The expected behaviors include proficiency regarding judgment, interpersonal and communication skills, and other competencies required in their job. This rating describes the employee whose overall performance is successful and above. Any minor areas where performance gaps exist were counterbalanced by overall successful performance and behavior that consistently met or exceeded expectations. The rating can also apply to employees new in their jobs who may be learning or lack experience but, overall, are successful in their role with no significant gaps in performance or behavior.  **Exceptional** – Employee consistently exceeds the majority of performance expectations and goals, and demonstrates judgment and behaviors commensurate with their position within the laboratory. The expected behaviors include a high level of proficiency regarding judgment, interpersonal and communication skills, and other competencies required in their job. | | | | |

|  |  |  |
| --- | --- | --- |
| **Employee and line manager review the following items together and initial upon review.** | | |
| **Initial each item** |  |
| **V.S.** | **I have reviewed the** [**Commitment to Safety and Environmental Stewardship**](http://thesource.nrel.gov/esh/commitment.html) **and reviewed my ESH training requirements with my line manager.** |
| **V.S.** | **I have reviewed my required training plan with my line manager and have submitted necessary changes to** [**institutionaltraining@nrel.gov**](mailto:institutionaltraining@nrel.gov)**.** |
| **V.S.** | **I have discussed** [**NREL’s Ethics Handbook**](https://highpoint.nrel.gov/sites/iop/Documents/gen/fy21/77850.pdf) **with my line manager and understand my responsibilities in these areas.** |
| **V.S.** | **I have discussed cybersecurity requirements, including personally identifiable information, and physical security requirements, such as visitor access and control issues, with my line manager and understand my responsibilities in these areas.** |

|  |
| --- |
| 1. **Employee Comments (Optional)** |
|  |

|  |
| --- |
| 1. **Signatures** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Employee:** | **Veronika Semchukova** |  | **Date:** | **12/11/2024** |
|  |  |  |  |  |
| **Employee’s Line Manager:** | **Mark Chung** |  | **Date:** | **12/10/24** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Reviewing Manager:** |  |  | **Date:** | **12/16/2024** |