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| 1. **Employee Information** | | | | |
| **Employee’s Name:** | Roberto Vercellino | | **Employee ID #:** | 23322 |
| **Review Period:** | October 1, 2023-Sept 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* | | |
| * Provide critical support to the decarbonization goals at the Dallas-Fort Worth (DFW) airport, by performing advanced analysis towards the electrification of its rental cars center using BTM storage and generation resources * Engage with DFW’s stakeholders and understand their specific goals. Generate and share a methodology and a set of tools which can support decarbonization at other airports across the U.S. | | [Athena ZEV](https://www.athena-mobility.org/) project:   * Contributed to project-level decisions on high-impact $7.5M VTO-funded project to inform decarbonization efforts at U.S. airports * Collaborated on development of EVI-Rental, a high-fidelity discrete event simulator for operation at electrified rental car centers (RCCs) hosting more than 20,000 vehicles * Used EVI-Rental and EVI-EDGES to estimate charging requirements and optimal behind-the-meter DERs at four major U.S. airports with different assumptions for a total of 180 scenarios * Consistently engaged with executive-level project partners through presentations and discussions, coordinating (often conflicting) project goals among sponsors and partners, including DOE, airports and rental car companies * Used project tools to directly inform current procurement of microgrid technology at DFW airport * Prepared slides that were presented to the U.S. Secretary of Energy Jennifer Granholm while visiting DFW | | |
| * Engage with stakeholders and the broad research community by submitting and presenting a research paper to a highly-valued technical conference | | * Presented Athena ZEV [project results](https://publicdownload.epri.com/PublicAttachmentDownload.svc/AttachmentId=88883) at EPRI’s Infrastructure Working Council. Authored paper to [EESAT2025](https://cmte.ieee.org/pes-eesat/call-for-papers/) conference (in review). Co-authored accepted to [TRB2025](https://trb-annual-meeting.nationalacademies.org/) conference | | |
| * Keep improving technical coding skills in the realms of energy systems control and optimization, distributed computing, techno-economic and resiliency analysis | | [EVI-EDGES](https://www.nrel.gov/transportation/evi-edges.html) software development:   * Implemented avoidance of electric grid distribution capacity upgrades through DER as one of the objectives in the tool’s design and control optimization routines * Increased accuracy of the tool implementing real-time battery storage controls using future load forecast instead of perfect foresight. Submitted work to [ACC2025](https://acc2025.a2c2.org/) conference * Collaborated with researchers in NREL’s CSC to incorporate and test within EIV-EDGES different optimization methods on NREL’s HPC, including sequential grid, genetic algorithms and surrogate-based optimization methods. Co-authored [conference paper](https://psecommunity.org/LAPSE:2024.1557) on this work * Developed pipeline for integrating EVI-EDGES with other tools in the EVI-X suite (EVI-EnSite and -Rental), to efficiently submit and monitor large problems on NREL’s HPC. Tested pipeline on Kestrel, running more than 27,000 year-long simulations simultaneously - 216,000 in total – in the context of the Athena ZEV project | | |
| * Lead or provide critical contribution to a project proposal to DOE or other entities for completing the development of EVI-EDGES, publish a well-documented open-source version of the model, compile a public library with a large number of analysis scenarios and built-in advanced visualizations to inform key electrification decisions. | | Experience in Manager and PI Roles:   * Drafted, negotiated and executed as PI SPP agreement with Faith Technology Inc. to evaluate microgrid technology market. Agreement totaled at $180k and will fund 5 NREL researchers (with more to come) * Served as NREL’s PI on multi-lab collaborative response to OCED’s Lab Call focused on Carbon Management TEA support. Total project funding totals $7.7M, including $750k to NREL over three years * Coordinated as PI a response to JOET Communities taking charge [FOA](https://driveelectric.gov/communities-taking-charge) in partnership with City of Denver’s Climate Action Sustainability and Resiliency ([CASR](https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Climate-Action-Sustainability-Resiliency)) office and two other NREL researchers * Consistently engaged with DOE and eight industry partners to capitalize on project opportunities, including FOAs and SPP projects | | |
|  | | Beamer NREL Template:   * Wrote [NREL template](https://thesource.nrel.gov/publishing/write-latex) for creating presentations in LaTeX. Worked with Comms to ensure template meets standards before making it available across NREL | | |
| **Line Manager’s Feedback** | | | | |
| **Manager Feedback:**   1. Robi has done an outstanding job this year in the projects he’s been involved with. This is clear not only from results, but by comments from his peers. 2. I would like to continue to see Robi grow in his RIII role from a technical perspective and see further development of both skills and his confidence. 3. We talked briefly about Researcher vs. Technologist roles so I would also like Robi to take this into consideration this next FY as he’s growing his capabilities as to which direction he’d like to lean toward by the end of FY25. I ask this because I see great potential in Robi and only want to ensure I can support him on whichever path he wishes to pursue as early as possible. 4. I do wish to grow more awareness around EVI-EDGES, so would like to see Robi think through what an ideal customer might look like and what problem they’re looking to solve so we can (1) Bring in additional research with this tool and (2) Figure out what value-added capabilities we should consider adding. 5. As Robi continues to PI projects, I advise him to reach out to me as early as possible for questions or mentoring as this can be difficult to do for some who are new to it.   **Peer Review Feedback and area for improvement, if any:**   1. Robi is methodic and organized, and that eases collaboration with them. After a meeting we had, we decided it was valuable to refactor the optimization loop in the EVI-EDGES software. Robi did so quickly and nicely, and our collaboration continued smoothly after it. 2. Robi is very knowledgeable in the subjects they deal with at work, and seems to appreciate learning more about other areas. Robi was curious to test different optimization strategies for the EVI-EDGES software, and learn more about them. Some of their numerical results guided us on what is missing and which methods seem to work better for the application. 3. Robi take initiative and often completes necessary tasks without being asked. He is the type of staff that I love working with for that reason. He is also very productive and brings a lot of thought and creativity to the project. We recently received an additional 2.2M from VTO and I wouldn't have accepted the money if Robi wasn't able to help with the work. His work on EVI-Edges is critical to our success. 4. I think Robi is a natural leader and I'd like to see him lead more work. 5. Software development processes and tools, and software design patterns. That will improve Robi's abilities to produce and maintain software at NREL. | | | | |
| **Major Performance Objectives for Next Fiscal Year:** State major objectives for next year. | | | | |
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| * Continue supporting Athena ZEV project by:   + Extending analysis to 10 large U.S. airports   + Extending analysis to other transportation modes (e.g. shuttle buses, short/long term parking, etc.)   + Implementing smart charge management strategies | | | | |
| * Continue developing EVI-EDGES by:   + Increasing computation speed and solution accuracy   + Establishing agreement with DOE and NREL for licensing EVI-EDGES to partners | | | | |
| * Continue fostering project opportunities with DOE and industry partners, by:   + Submitting at least 2 applications in response to FOAs or Lab Calls   + Fostering collaboration with FTI by completing current project successfully and exploring opportunities for further work | | | | |
| * **Areas for Growth, Development and Challenge:** List skills, knowledge, or attributes that need to be developed or strengthened. | | | | |
| 1. Areas for growth include:    * Improve skills at managing projects and delegating tasks    * Become more effective at managing time among completing project tasks, pursuing new opportunities, learning new skills and replying to e-mails    * Improve data analysis skills through interactive web-based results visualization | | | | |
| **Overall Performance Rating:** | | | | |
| |  |  | | --- | --- | | |  | | --- | | **Successfully meets or exceeds expectations** |   **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. | | | | |
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| **Employee and line manager review the following items together and initial upon review.** | | |
| **Initial each item** |  |
| **RV** | **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.** |
| **RV** | **I have reviewed my required training plan with my line manager and have submitted necessary changes to** [**institutionaltraining@nrel.gov**](mailto:institutionaltraining@nrel.gov)**.** |
| **RV** | **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.** |
| **RV** | **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.** |

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

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| **Employee:** | **Roberto Vercellino** |  | **Date:** | **12/12/2024** |
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| **Employee’s Line Manager:** | **Mark Chung** |  | **Date:** | **12/6/24** |

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