

## **Proposal Approval Summary Form**

This form must be completed, returned to the Grants Office, and reviewed by President's Cabinet before submitting a grant proposal. If you have any questions regarding this form or the proposal development process, please contact the Grants Office at <a href="mailto:grants@mtsac.edu">grants@mtsac.edu</a>.

| <b>Principal Inve</b>  | estiga                  | ato      | r/Project   | Director  |  |            |   |
|--|-------------------------|----------|---|---|--|------------|---|
|  |                         |          |   |   |  |            |   |
| Name   | Mari                    | o H      | ernandez  |   | Department   | Air Con    | ditioning & Refrigeration   |
| Email  | mhe                     | rnar     | ndez620@r   | ntsac.edu   | Phone  | 909-27     | 4-4750  |
|  |                         |          |   |   |  |            |   |
| Other Project  | Coll                    | abo      | orators   |   |  |            |   |
| <del>-</del>   |                         |          |   |   |  |            |   |
| Name   | Fred                    | Kol      | ozoff   |   | Department   | Air Con    | ditioning & Refrigeration   |
| Name   | Darr                    | ow       | Soares  |   | Department   | Air Con    | ditioning & Refrigeration   |
| Name   |                         |          |   |   | Department   |            |   |
| Name   |                         |          |   |   | Department   |            |   |
|  | ı                       |          |   |   |  |            |   |
| <b>Funding Oppo</b>  | ortur                   | nity     | Details   |   |  |            |   |
|  |                         |          |   |   |  |            |   |
| Opportunity Name   | e                       | Ind      | ustry Drive   | en Regional Co  | ollaboratives  |            |   |
| Sponsoring Agenc   | У                       | Cal      | ifornia Con   | nmunity Colle   | ges Chancellor's O   | ffice      |   |
| Pass-through Enti<br>(if applicable)   | ty                      |          |   |   |  |            |   |
| Sponsor Type   |                         |          | Local   | ✓ State   | □ Federal  |            | ☐ Private   |
| Proposal Type  |                         | <b>√</b> | New   | ☐ Renewal   | ☐ Resubmi  | ssion      | ☐Amendment  |
| Submission Deadl   | ine                     | Jul      | y 11, 2025  |   |  |            |   |
|  | ı                       |          |   |   |  |            |   |
| Funding Amount   |                         |          | \$201,238   |   | Project Duration   |            | 27 months   |
| Proposed Start Da  | te                      |          | 9/17/2025   | ;   | Proposed End Dat   | е          | 12/31/2027  |
|  |                         |          |   |   |  |            | l   |
| Does the opportur  |                         | )        | ☐ Yes   | ✓ No  | If yes, the project to submission with the   |            |   |
| 1 0 (7(07  |                         |          |   |   | •  |            |   |
| Are indirect costs (check appropriate  |                         | ed?      | ✓ Yes   | □ No  | Indirect Cost Rate (if applicable)   |            | 4% of total direct costs  |
|  |                         |          |   |   |  |            |   |
| Is match required (check appropriate   |                         |          | ✓ Yes   | □ No  | Match Amount (if applicable)   |            | 1:1 match of request  |
| If match is require  | ed, hov                 | V        | The metals  | ing noguinoss   |  | l 1, 5+h i | land contributions of   |
| do you intend to sa<br>this requirement?   | atisfy                  |          | Mt. SAC st  | aff, managem  | ent, and faculty tir   | ne, as w   | ell as contributions from   |
|  |                         |          |   |   | •  |            |   |
| Funding Amount Proposed Start Da  Does the opportur require 501(c)(3) s  Are indirect costs (check appropriate (check appropriate If match is required do you intend to se | allowe box) Ped, hoved, | Jul      | y 11, 2025  \$201,238  9/17/2025  Yes  Yes  Yes  The match Mt. SAC st North Ame | ✓ No  ☐ No  ☐ No  ing requirements aff, management erican Sustain | Project Duration Proposed End Dat  If yes, the project to submission with the submission with the content of th | e team mus | 27 months  12/31/2027  st coordinate the C Foundation.  4% of total direct costs  1:1 match of request -kind contributions of ell as contributions from (NASRC), who will |

### **Project Summary**

Use the following prompts to provide an overview of the proposed project. If desired, attach additional information to this form.

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|-----|----------|-----------|
| Pro | iect Dec | scription |
| 110 |          | ociipuon  |

What need will the project address? What activities will be implemented?

Hydro fluorocarbon refrigerants (HFCs) found in most air conditioning and refrigeration equipment are considered "super" greenhouse gases because pound for pound they trap thousands of times more heat than carbon dioxide (CO2). California is scaling down the use of HFC refrigerants, which will require the HVACR workforce to gain new skills in working with equipment that supports alternative refrigerants. This project - The New Climate Workforce in Air Conditioning and Refrigeration - will help prepare Mt. SAC's faculty, HVACR students, and the future workforce for these changes.

### **Expected Outcomes**

What are the project's expected benefits/outcomes?

The project will achieve the following:

- (1) Conduct advisory committee meetings to modify SLOs for courses that support low and zero GWP refrigerant adoption and handling.
- (2) Provide professional development for Air Conditioning and Refrigeration faculty to remain current on practices and regulations around low and zero GWP practices, procedures, policies, and phase-down schedules.

  (3) Develop and submit curriculum modifications to Mt. SAC's EDC by May 2026.
- (4) Develop and approve "Credit by Exam" assessments for high school, adult education, ROP students, and incumbent HVACR technicians to earn credit for previous learning and work experience.
- (5) Purchase equipment and lab trainers that that expose students to low and zero GWP refrigerants.
- (6) Arrange, organize, schedule, and deploy student access to Work Based Learning sights with contractors and end users that refrigerate and control building climates with low and zero GWP refrigerants.

#### Partners

If applicable, list partners and their roles in the project. Will Mt. SAC issue sub-awards?

Mt. SAC will partner with North American Sustainable Refrigeration Council (NASRC), an environmental nonprofit that works to advance climate-friendly natural refrigerants and reduce greenhouse gas emissions caused by traditional HFC refrigerants. They will leverage their vast network network of commercial refrigeration industry stakeholders (e.g., supermarkets, grocery stores) to connect our students with work experience placements, contributing to the project's matching requirement through direct supervision of these student placements.

#### **Budgetary Needs**

Describe the project's budgetary needs. For personnel, specify type(s). For faculty reassignment/overload requests, specify the names and planned allocation of time.

Budgetary items will include faculty salaries (hourly) to attend training, develop credit-by-exam, and develop course-specific curriculum, short-term hourly salaries to assist with equipment installation, student salaries for mentor activities, associated employee benefits, supplies for advisory meetings, lab development supplies and instructional materials, equipment for CO2 refrigeration and A2L air conditioning systems, and indirect costs. Please also see attached budget spreadsheet.

#### Sustainability Plan

What is the plan for continuing grant activities beyond the project period?

The project is designed with sustainability in mind. The primary costs are related to equipment upgrades needed to train students on the use of alternative refrigerants. This grant will enable the College to purchase this equipment. Modified and new curriculum will continue post-grant at no additional cost to the college. Students will continue to benefit with the most up-to-date training and technology after the grant period.

| $\Lambda$ | SS | 17.70 | $\mathbf{o}$ | n c |
|-----------|----|-------|--------------|-----|
|           |    |       | <i>a</i> 1   |     |
|           |    |       |              |     |

|   |  | ssociated with this role and will conduct conditions of the sponsoring agency and  |
|---|--|--|
| meeting the requirements of the av  | ward, including, but                             | d by the College, I will be responsible for<br>not limited to, providing the proper<br>uired progress reports and deliverables |
| If sponsored funds are used for per<br>commitment beyond the project per  |  | d that the College makes no ongoing  |
| ☑ Where funds are requested for lect<br>Educational Administrator, and th   | _  | s, I have reviewed this request with my ignment/overload request.  |
| Mario Hernandez   | 7-4-2025   | Professor  |
| Mario Hernandez Signature of Project Lead   | Date   | Title  |
|   |  |  |
| Approval  |  |  |
|   | el titles, classificatio                         | n the project summary, but they do not<br>ons, salary rates, or other issues governed  |
| James Bound   | 7-7-25   | Dean   |
| Signature of Responsible Administrator  | 7-7-25<br>Date                                   | Dean<br>Title  |
| Signature of Responsible Administrator  Meghan M. Chen, PhD Date: 2025.07.07 08:58:35 -07'00'                                 |  |  |
| Meghan M.  Chen, PhD  Date: 2025.07.07 08:58:35   | Date   | Title  |
| Meghan M. Chen, PhD Date: 2025.07.07 08:58:35 -07'00' Signature of Responsible Vice President                                 | Date 7-7-2025                                    | Title  AVP Instruction   |
| Meghan M. Chen, PhD Date: 2025.07.07 08:58:35 -07'00'   | Date 7-7-2025                                    | Title  AVP Instruction   |
| Meghan M. Chen, PhD Date: 2025.07.07 08:58:35 -07'00' Signature of Responsible Vice President                                 | Date 7-7-2025                                    | Title  AVP Instruction  Title  |
| Meghan M. Chen, PhD Date: 2025.07.07 08:58:35 -07'00'  Signature of Responsible Vice President  Review by President's Cabinet | Date  7-7-2025  Date  ☐ Approved ☐ Conditionally | Title  AVP Instruction  Title  |

# **DRAFT** - Industry Driven Regional Collaboratives Budget Request

| 1000 - Instructional Salaries  | Total | Request |
|--|-------|---------|
| Faculty to attend training on zero ODP and A2L refrigerants: 4 faculty | \$    | 5,342   |
| members x 20 hours/faculty member x \$66.78/hour                       |       |         |
| Faculty to to develop credit-by-exam: 40 hours x \$66.78/hour          | \$    | 2,671   |
| Faculty to develop course-specific curriculum: 40 hours x \$66.78/hour | \$    | 2,671   |
| Subtotal   | \$    | 10,684  |

| 2000 - Non-instructional Salaries  | Tota | l Request |
|--|------|-----------|
| Student Assistants (Level V) to serve as credit-by exam mentors: 60 hours  | \$   | 12,150    |
| x \$19.50/hour   |      |           |
| Technical Experts (Level I) to provide expertise in new equipment and lab  | \$   | 6,000     |
| development: 200 hours x \$30/hour   |      |           |
| Technical Support (Level IV) to assist with installation of lab equipment: | \$   | 14,080    |
| 512 hours x \$27.50/hour   |      |           |
| Subtotal   | \$   | 32,230    |

| 3000 - Employee Benefits  | Total | Request |
|---|-------|---------|
| Instructional Salaries: 19.1% California State Teachers' Retirement System, | \$    | 2,341   |
| 1.45% Medicare, 0.05% state unemployment insurance (SUI), 1.31%             |       |         |
| workers' compensation (WC)  |       |         |
| Non-instructional Salaries: 3% alternative retirement plan, 1.45%           | \$    | 1,873   |
| Medicare, 0.5% SUI, 1.31% WC  |       |         |
| Subtotal  | \$    | 4,214   |

| 4000 - Supplies and Materials  | Tota | l Request |
|--|------|-----------|
| Noninstructional, promotional, and/or food supplies for advisory           | \$   | 3,000     |
| committee meetings: 6 meetings x \$500/meeting                             |      |           |
| Lab development supplies and materials, such as R-32 refrigerant, R-32     | \$   | 19,710    |
| recovery cylinders, refrigerant lines, hangers, insulation, and electrical |      |           |
| materials  |      |           |
| A2L tools and meters   | \$   | 10,950    |
| Subtotal   | \$   | 33,660    |

| 5000 - Other Operating Expenses and Services                                | Tota | l Request |
|---|------|-----------|
| Conference and travel costs for Air Conditioning & Refrigeration faculty to | \$   | 5,400     |
| attend professional conference (e.g., CCCAOE): 3 faculty members x          |      |           |
| \$1,800/faculty member  |      |           |
| Subtotal  | \$   | 5,400     |

| 6000 - Capital Outlay   | Tota | l Request |
|---|------|-----------|
| CO2 refrigeration equipment, controls, and components, such as: | \$   | 90,885    |
| (1) 4 hp CO2 outer unit   |      |           |
| (1) adiabatic cooler  |      |           |
| (4) 8,000 btu/hr evaporator cells                               |      |           |
| (1) Evapco 210 controller                                       |      |           |
| (4) CO2 refrigerant cylinders                                   |      |           |
| A2L air conditioning systems                                    | \$   | 16,425    |
| Subtotal  | \$   | 107,310   |

|   | Tota | <b>Total Request</b> |  |
|---|------|----------------------|--|
| Total Direct Costs                        | \$   | 193,498              |  |
| Indirect Costs (4% of Total Direct Costs) | \$   | 7,740                |  |
|   |      |                      |  |
| Total Request                             | \$   | 201,238              |  |

# **DRAFT** - Industry Driven Regional Collaboratives Matching Funds

| 1000 - Instructional Salaries   | Match     | ing Funds |
|---|-----------|-----------|
| Professor Mario Hernandez to implement project activities through         |           |           |
| contractual service to the college hours: 4 semesters x 16 weeks/semester |           |           |
| x 4 hours/week x \$64.55/hour   | \$        | 16,525    |
| Subtotal  | <b>\$</b> | 16,525    |

| 2000 - Non-instructional Salaries                                      | <b>Matching Funds</b> |        |
|--|-----------------------|--------|
| Administrative Specialist II Jocelyn Lopez to assist with student work |                       |        |
| experience scheduling and documentation: 10% of time and effort        | \$                    | 6,981  |
| Associate Dean of Career Education and Strong Workforce Dejah Swingle  |                       |        |
| to provide oversight of grant activities: 5% of time and effort        | \$                    | 10,634 |
| Subtotal   | \$                    | 17,615 |

| 3000 - Employee Benefits  | Matching | <b>Funds</b> |
|---|----------|--------------|
| Mario Hernandez: 19.1% California State Teachers' Retirement System,    |          |              |
| 1.45% Medicare, 0.05% state unemployment insurance (SUI), 1.31%         |          |              |
| workers' compensation (WC)  | \$       | 3,621        |
| Jocelyn Lopez: 27.05% California Public Employees Retirement System     |          |              |
| (PERS), 6.2% OASDI, 1.45% Medicare, 0.05% SUI, 1.31% WC, \$1,262 health |          |              |
| & welfare   | \$       | 3,779        |
| Dejah Swingle: 27.05% CalPERS, 6.2% OASDI, 1.45% Medicare, 0.05% SUI,   |          |              |
| 1.31% WC, \$1,422 health & welfare                                      | \$       | 5,257        |
| Subtotal  | \$       | 12,657       |

| 5000 - Other Operating Expenses and Services                          | <b>Matching Funds</b> |  |
|---|-----------------------|--|
| Supervision of students enrolled in work experience from NASRC member |                       |  |
| technicians: 2 cohorts x 15 students/cohort x 108 hours/student x     | \$ 155,520            |  |
| Subtotal  | \$ 155,520            |  |

|  | Mato | <b>Matching Funds</b> |  |
|--|------|-----------------------|--|
| Matching Direct Costs                              | \$   | 202,317               |  |
| Indirect Costs (4% of Total Matching Direct Costs) | \$   | 8,093                 |  |
|  |      |                       |  |
| Total Matching Funds                               | \$   | 210,410               |  |