

STATE LMI IMPROVEMENT THROUGH  
PROJECTIONS INFRASTRUCTURE MODERNIZATION

PART I. COST PROPOSAL

SF-424

SF-424A

Budget Narrative

**Application for Federal Assistance SF-424**

Version 02

\*1. Type of Submission:

- Preapplication
- Application
- Changed/Corrected Application

\*2. Type of Application

- New
- Continuation
- Revision

\* If Revision, select appropriate letter(s)

\*Other (Specify)  
\_\_\_\_\_

3. Date Received:

4. Applicant Identifier:

5a. Federal Entity Identifier:

\*5b. Federal Award Identifier:

**State Use Only:**

6. Date Received by State:

7. State Application Identifier:

**8. APPLICANT INFORMATION:**

\*a. Legal Name: Nevada Department of Employment, Training and Rehabilitation

\*b. Employer/Taxpayer Identification Number (EIN/TIN):  
88-600022

\*c. Organizational DUNS:  
809888241

**d. Address:**

\*Street 1: 500 East Third Street

Street 2: \_\_\_\_\_

\*City: Carson City

County: \_\_\_\_\_

\*State: Nevada

Province: \_\_\_\_\_

\*Country: USA

\*Zip / Postal Code 89713

**e. Organizational Unit:**

Department Name:  
Department of Employment, Training and Rehabilitation

Division Name:  
Research and Analysis Bureau

**f. Name and contact information of person to be contacted on matters involving this application:**

Prefix: \_\_\_\_\_ \*First Name: William

Middle Name: D

\*Last Name: Anderson

Suffix: \_\_\_\_\_

Title: Chief Economist

Organizational Affiliation:

\*Telephone Number: (775) 684-0387

Fax Number: (775) 684-0342

\*Email: wdanderson@nvdestr.org

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Version 02

**\*9. Type of Applicant 1: Select Applicant Type:**

A.State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\*Other (Specify)

**\*10 Name of Federal Agency:**

**US Department of Labor, Employment and Training Administration**

**11. Catalog of Federal Domestic Assistance Number:**

17-275 \_\_\_\_\_

CFDA Title:

PROGRAM OF COMPETITIVE GRANTS FOR WORKER TRAINING AND PLACEMENT IN HIGH GROWTH AND EMERGING INDUSTRY SECTORS

**\*12 Funding Opportunity Number:**

SGA/DFA PY 08-17

\*Title:

State Labor Market Information Improvement Grants

**13. Competition Identification Number:**

\_\_\_\_\_

Title:

\_\_\_\_\_

**14. Areas Affected by Project (Cities, Counties, States, etc.):**

**Nationwide**

**\*15. Descriptive Title of Applicant's Project:**

State LMI Improvement through Projections Infrastructure Modernization

**Application for Federal Assistance SF-424**

Version 02

**16. Congressional Districts Of:**

\*a. Applicant: \_\_\_\_\_

\*b. Program/Project: \_\_\_\_\_

**17. Proposed Project:**

\*a. Start Date: 11/01/2009

\*b. End Date: 04/30/2011

**18. Estimated Funding (\$):**

*a. Federal	_____	\$3,753,000
*b. Applicant	_____	
*c. State	_____	
*d. Local	_____	
*e. Other	_____	
*f. Program Income	_____	
*g. TOTAL	_____	\$3,753,000

**\*19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- a. This application was made available to the State under the Executive Order 12372 Process for review on \_\_\_\_\_
- b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- c. Program is not covered by E. O. 12372

**\*20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

Yes       No

21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U. S. Code, Title 218, Section 1001)

\*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions

**Authorized Representative:**Prefix: \_\_\_\_\_ \*First Name: Larry \_\_\_\_\_Middle Name: J \_\_\_\_\_\*Last Name: Mosley \_\_\_\_\_

Suffix: \_\_\_\_\_

\*Title: Director, Department of Employment, Training and Rehabilitation

\*Telephone Number: 775-684-3911

Fax Number: 775-684-3908

\* Email: [ljmosley@nvdetr.org](mailto:ljmosley@nvdetr.org)

\*Signature of Authorized Representative: \_\_\_\_\_

\*Date Signed: \_\_\_\_\_

**Application for Federal Assistance SF-424**

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**\*Applicant Federal Debt Delinquency Explanation**

The following should contain an explanation if the Applicant organization is delinquent of any Federal Debt.

**BUDGET INFORMATION - Non-Construction Programs**

**SECTION A - BUDGET SUMMARY**

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. PROGRAM OF COMPETITIVE GRANTS FOR WORKER TRAINING AND PLACEMENT IN HIGH GROWTH AND EMERGING INDUSTRY SECTORS	17.275	\$	\$	\$3,753,000	\$	\$3,753,000
2.						
3.						
4.						
5. Totals		\$ 0.00	\$ 0.00	\$3,753,000	\$ 0.00	\$3,753,000

**SECTION B - BUDGET CATEGORIES**

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
a. Personnel			\$1,332,174		\$1,332,174
b. Fringe Benefits			\$333,043		\$333,043
c. Travel			\$108,000		\$108,000
d. Equipment			\$0		\$0
e. Supplies			\$100,000		\$100,000
f. Contractual			\$1,630,000		\$1,630,000
g. Construction			\$0		\$0
h. Other			\$0		\$0
i. Total Direct Charges (sum of 6a-6h)	0.00	0.00	\$3,503,217	0.00	\$3,503,217
j. Indirect Charges			\$249,783		\$249,783
k. TOTALS (sum of 6i and 6j)	\$ 0.00	\$ 0.00	\$3,753,000	\$ 0.00	\$3,753,000
7. Program Income	\$	\$	\$	\$	\$ 0.00

<b>SECTION C - NON-FEDERAL RESOURCES</b>					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8.				\$	0.00
9.				\$	0.00
10.				\$	0.00
11.				\$	0.00
12. Total (SUM OF LINES 8-11)				\$	0.00
<b>SECTION D - FORECASTED CASH NEEDS</b>					
13. Federal	Total for 1 <sup>st</sup> Year	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
	\$2,502,000	\$625,500	\$625,500	\$625,500	\$625,500
14. Non-Federal	\$0	\$0	\$0	\$0	\$0
15. TOTAL (sum of lines 13 and 14)	\$2,502,000	\$625,500	\$625,500	\$625,500	\$625,500
<b>SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT</b>					
(a) Grant Program	FUTURE FUNDING PERIODS (years)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16. PROGRAM OF COMPETITIVE GRANTS FOR WORKER TRAINING AND PLACEMENT IN HIGH GROWTH AND EMERGING INDUSTRY SECTORS	\$2,502,000	\$1,251,000	\$	\$	
17.					
18.					
19.					
20. TOTAL (sum of lines 16-19)	\$2,502,000	\$1,251,000	\$	0.00	\$ 0.00
<b>SECTION F - OTHER BUDGET INFORMATION</b>					
21. Direct Charges:		22. Indirect Charges: \$1,665,217 @ 15% = \$249,782			
23. Remarks:					

Authorized for Local Reproduction

## **State LMI Improvement through Projections Infrastructure Modernization**

### **Budget Narrative – \$3,753,000**

#### **a. Personnel – \$1,332,174**

Colorado	\$160,000
Florida	\$32,000
Illinois	\$120,000
Nevada	\$80,000
New York	\$24,000
North Carolina	\$40,000
Texas	\$24,000
Utah	\$852,174

Personnel costs are based on a number of state resources charging varying percentages of time to the project for 18 months. Grant Administrative costs in the amount of 2.7% of the grant are included in the Personnel and Fringe Benefits for the State of Nevada as the lead state and fiscal agent for the grant. Illinois will act as the technical lead for software modernization and development to include software testing, subject matter expert for training curriculum development. Utah will provide software modernization and development service. Colorado will assist Nevada with administrative role, software testing and represent the Projections Consortium on training redevelopment activities to include providing subject matter expertise on multiple aspects of projections training. North Carolina will assist in the training redevelopment effort and serve as a software test state. Texas, Florida and New York will provide subject matter expertise for training development and software testing.

**b. Fringe Benefits – \$333,043**

Colorado	\$40,000
Florida	\$8,000
Illinois	\$30,000
Nevada	\$20,000
New York	\$6,000
North Carolina	\$10,000
Texas	\$6,000
Utah	\$213,043

Fringe costs are based on 25% of project salary cost.

**c. Travel – \$108,000**

Colorado	\$13,500
Florida	\$13,500
Illinois	\$13,500
Nevada	\$13,500
New York	\$13,500
North Carolina	\$13,500
Texas	\$13,500
Utah	\$13,500

Travel costs are based on each state sending two staff to three project team meetings over the duration of the project.

**d. Equipment – \$0**

There are no costs associated with this line item.

**e. Supplies – \$100,000**

Supply costs are based on training manual and materials printing and office supplies.

**f. Contractual (Professional Services) – \$1,630,000**

Colorado	\$0
Florida	\$0
Illinois	\$0
Nevada	\$1,630,000
New York	\$0
North Carolina	\$0
Texas	\$0
Utah	\$0

Contractual costs are based on activities related to the complete rewrite of the projections software (\$880,000) and the development of training (\$750,000).

**g. Construction – \$0**

There are no costs associated with this line item.

**h. Other Costs – \$0**

There are no costs associated with this line item.

**j. Indirect Costs – \$249,783**

Colorado	\$30,000
Florida	\$6,000
Illinois	\$22,500
Nevada	\$15,000
New York	\$4,500
North Carolina	\$7,500
Texas	\$4,500
Utah	\$159,783

Indirect costs are based on an estimated Indirect Cost Rate of 15% of project salary and fringe benefit costs.

STATE LMI IMPROVEMENT THROUGH  
PROJECTIONS INFRASTRUCTURE MODERNIZATION

PART II. TECHNICAL PROPOSAL

# TECHNICAL PROPOSAL

## State LMI Improvement through Projections Infrastructure Modernization

### **STATEMENT OF NEED**

The nationwide projections program operated by state LMI shops currently has two principal components: industry and occupational employment. Typically, states project employment in approximately one hundred industries. Depending on the composition of a state's economy, some industries may represent an aggregate level of activity, e.g., natural resources and mining. Other industries, though, reflect a more detailed delineation: the healthcare sector is often subdivided into hospitals, outpatient clinics, home healthcare services, or diagnostic laboratories. The occupational employment projections respond to the question of anticipated job growth or decline. The methodology draws on the staffing patterns produced from the Occupational Employment Survey and yields employment projections for nearly seven hundred occupations.

In addition to flexibility of forecast horizon, projections products are available for statewide and a variety of sub state geographic configurations, such as Workforce Board areas, metropolitan statistical areas, or economic development regions. Methodologies and software tools are embedded in the projections program to accommodate different levels of geographic specificity. The customer focus often reflects a concern for local labor market conditions, and the national projections program has been responsive to that concern.

The Projections Suite software, developed by the Projections Consortium, has been used successfully by states for more than a decade. The suite is written on a Microsoft Visual FoxPro

(VFP) 8.0 platform with a FoxPro database as a data container. In March 2007, Microsoft announced that no code updates were planned for VFP and the software would be completely discontinued in 2015. This decision has several immediate and potentially detrimental effects on the projections infrastructure. Microsoft will no longer offer technical support on the FoxPro software to the Projections Suite developers. Second, the Suite software will not be able to integrate more current Microsoft products that could enhance data flow, manipulation, or processing. In fact, it may not run at all under future versions of Windows. The national projections infrastructure is vulnerable to systemic interruption and inefficiency.

In addition to an urgent need to update the software platform upon which the Projections Suite operates, modernization provides the opportunity to develop and incorporate features to address the needs of the Workforce System and other users of labor market information to better understand emerging demand for green occupations and skills and, more generally, demand for skills across the economy. The green economy, while not yet firmly established, holds the promise of significant job growth. Conversations among labor market information stakeholders, including those involved with labor exchange, reflect a variety of definitions that might be used to identify green industries, green occupations and green skills. Because the green sector is not mature, the articulation of green occupations to green industries and the articulation of green skills to green occupations are both matters of some debate. This grant application includes a proposal to provide a framework for advancing the discussion and new tools to develop empirical results for evaluation within the Projections Consortium software infrastructure. With these new tools states will have the flexibility to customize green industry, occupation and skill definitions to meet local needs.

The current Projections training infrastructure, covering use of existing software and short and long-term industry and occupation forecasting methodologies, is inadequate for developing capacity within state LMI shops to meet projections deliverables and customer needs. Although current Projections training does a relatively good job in preparing states to provide quality projections, there are several drawbacks. First and foremost there is a dependence on finding qualified, expert trainers willing and able to provide their services in-kind. Many of those used in the past have retired or moved on to new positions. These volunteer trainers also have other full-time jobs that require their attention making it difficult to adequately address the needs of the Projections training program. A second serious drawback is the high cost of training. While the direct costs of the facility, equipment and supplies are relatively inexpensive (\$8,000 to \$25,000) per session, the indirect costs of wages and travel for the trainers and students are significant. Depending on the location, individual participant costs could range from \$1,000 to \$2,500 per person per session. The total cost for one training session for 25 participants and three trainers could easily total \$90,000.

These issues make it difficult for the Projections Consortium to offer comprehensive, timely training. The Consortium feels a new approach for the delivery of training is needed.

The Projections Consortium proposes to 1) modernize the Projections Suite and the Projections training program to improve and sustain states' ability to provide information on current and future industry and occupation demand, 2) develop new tools and training to allow states to routinely provide information on current and future skills demand developed in the context of the

O\*NET framework, 3) provide enhancements to current tools and training and include features in new tools and training to allow states to provide information on current and future demand of green industries, occupations and skills, and 4) develop a plan for efficient delivery of a multi modal approach to projections training.

## **STRATEGIC PARTNERSHIPS AND ORGANIZATIONAL CAPACITY**

The Projections Consortium (also, Projections Managing Partnership) is responsible for the development and maintenance of the national projections program. The genesis of this statistical program is a state initiative reflective of state-specific needs and customer-based product development. The ongoing state management of this program distinguishes it from other national statistical programs that assume a more distinct federal focus. The Projections Consortium is inclusive of federal partners, the Employment and Training Administration and the Bureau of Labor Statistics, but its national programmatic initiatives reflect more of a state-level motivation. State members of the Consortium include: the Nevada Department of Employment, Training and Rehabilitation; Colorado Department of Labor and Employment; Florida Agency for Workforce Innovation; Illinois Department of Employment Security; New York Department of Labor; North Carolina Employment Security Commission; Texas Workforce Commission; and, the Utah Department of Workforce Services. A major accomplishment of the Projections Consortium is the development and delivery of a set of software tools, the Projections Suite, that provide a common methodology for use by all states' projections programs for short (two year) and long-term (ten year) industry and occupation projections. Use of these tools allows states to routinely develop projections which are consistent and comparable across the U.S.

To accomplish the proposed goals, Consortium members will serve in the following capacities: Nevada – lead state and fiscal agent for the work proposed under this grant application; Illinois – technical lead for software modernization and development to include software testing, subject matter expert for training curriculum development; Utah – software modernization and development services; Colorado – assist Nevada with administrative role, software testing and represent the Projections Consortium on training redevelopment activities to include providing subject matter expertise on multiple aspects of projections training; North Carolina – assist in the training redevelopment effort and serve as a software test state; and, Texas, Florida and New York – provide subject matter expertise for training development and software testing.

A Projections Consortium partner, the Labor Market Information Training Institute, which is under new leadership, is a consortium of state LMI agencies that has managed training for the LMI system since 1994. The Institute’s role in this process is to manage the design and implementation of the proposed training activities to ensure that LMI staff across the system is well versed in the methods and approaches adopted for the Projections program.

## **STRATEGY AND PROJECT WORK PLAN**

### **Software Rewrite and Development**

The Projections Suite is inclusive of four desktop software systems (data preparation, short-term industry projections, long-term industry projections and occupational projections) with two web-based software systems fully integrated into the projections process as proposed deliverables under this work plan: skills-based employment projections and an occupational descriptor module. The delineation of the suite by platform (PC vs. Web based) is dictated by the use of

state confidential micro data in the desktop systems and the need to be sensitive to the variety of state laws governing the use of confidential data in data processing systems that reside outside of a particular state. The web-based systems will not require the use of confidential data. These systems realize cost savings and efficiency gains through system development and maintenance.

The rewrite of the Projections Suite will occur in C# programming language utilizing Microsoft's .NET framework. This approach lends flexibility to software development in either a desktop or web-based environment and, thus, is well suited to this project. This flexibility creates potential for feature duplication and integration of data flow that will extend the "suite" concept to different platforms. The scope of the rewrite is to maintain the existing screen design and system flow unless a change is required because of the new code or database environment. Four major task groupings comprise the rewrite endeavor: feature itemization and prioritization; system design and development; feature testing and validation; and help documentation.

Feature itemization and prioritization: The software development staff concluded a preliminary proposal on feature itemization and prioritization last year that will require a modest update. The preliminary list will be submitted to state subject matter experts, designated by the Projections Consortium, to ensure completeness of existing feature coverage as well as inclusiveness of possible enhancements that should be part of the rewrite. Features will be prioritized based upon contribution to business value and core functionality in the system architecture. In addition, industry software will be considered first, as it generates the critical input to the occupational software.

Software developers will designate common feature sets between the Projections Suite software that will economize, where possible, shared functionality. Based on these conclusions, detailed development timelines and milestones will be identified to ensure adequate transparency in the development process for those charged with overseeing development. The following table displays the key milestones for the feature identification process:

Deliverable	Due Date
<ul style="list-style-type: none"> <li>• Identification and Validation of all Principal &amp; Auxiliary Software Features, Including Enhancements, Completion of Candidate Database, and Database Access Design for Principal/Desktop Software (DPM, STIP, LTIP, MicroMatrix)</li> </ul>	November 2, 2009
<ul style="list-style-type: none"> <li>• Identification and Validation of High Priority Features of Industry-Focused Software (DPM, LTIP, STIP)</li> <li>• Identification of Core Functionality and Common Feature Sets across Principal Software (DPM, LTIP, STIP, MicroMatrix)</li> </ul>	November 9, 2009
<ul style="list-style-type: none"> <li>• Completion of Candidate Database &amp; Database Access Design for Auxillary/Web-Based Software (Skills-Based Projections, Occupational Descriptor)</li> </ul>	January 31, 2010
<ul style="list-style-type: none"> <li>• Identification and Validation of High Priority Features of Occupation-Focused Software (MicroMatrix, Skills-Based Projections, Occupational Descriptor)</li> <li>• Identification of Core Functionality and Common Feature Sets across Principal and Auxiliary Software Systems</li> </ul>	March 15, 2010

System design and development: Based on a prioritized queue of features across all systems weighted by contribution to core functionality and business value, the software programming team will develop the software utilizing an iterative approach. Development will be paired with extensive testing in parallel with the existing production systems for defect management. The scope of the rewrite is such that current systems provide a standard for defect identification. The

defect management process will be transparent such that key iterations will be downloaded by stakeholders for evaluation.

The Development Team will stagger the software completion dates based upon the order each system falls within the projections development cycle. This approach provides for a gradual transition to the new systems beginning November, 2010 and will also enable states to produce analysis on green occupations in the early summer of 2011. The following table depicts the candidate system release plan:

System	Begin Date	Completion Date
Data Preparation Module (includes database development and shared data operations)	November 1, 2009	October 31, 2010
STIP	November 1, 2009	October 31, 2010
LTIP	November 1, 2009	March 31, 2011
MicroMatrix	February 1, 2010	January 31, 2011
Skills-Based Projections & Report Manager	April 1, 2010	March 31, 2011
Occupational Descriptor	April 1, 2010	March 31, 2011

Development will also proceed iteratively with several smaller intermediate releases. These releases will primarily be tested in parallel with the existing systems by the Development Team, in accordance with the following iteration schedule:

Iteration	DPM	STIP	LTIP	MicroMatrix	SBP	Occupational Descriptor	Iteration Release Date
1.0	X	X	X				December 15, 2009
1.1	X	X	X				January 31, 2010
1.2	X	X	X	X			March 15, 2010
1.3	X	X	X	X			April 30, 2010
2.0	X	X	X	X	X	X	June 15, 2010
2.1	X	X	X	X	X	X	July 31, 2010

2.2	X	X	X	X	X	X	September 15, 2010
2.3	X	X	X	X	X	X	October 31, 2010
3.0			X	X	X	X	December 15, 2010
3.1			X	X	X	X	January 31, 2011
3.2			X		X	X	March 15, 2011
3.3			X		X	X	April 30, 2011

Feature testing and validation: In the development of timelines and milestones, software developers will identify specific software release windows to conduct testing and validation by state subject matter experts. Testing will confirm feature functionality and validation will determine adherence to the specifications established by the project team. Features will not be considered complete until they are tested and validated by state experts acting on behalf of the Projections Consortium. Feature testing and validation will occur in an environment of parallel processing, where appropriate, in the current and new Projections Suite systems. The software development team and the Projections Consortium designated the following preliminary acceptance testing windows:

Iteration	Acceptance Testing Begin Date	Acceptance Testing End Date
1.3	April 30, 2010	June 15, 2010
2.3	October 31, 2010	December 15, 2010
3.1	January 31, 2011	March 15, 2011
3.3	April 30, 2011	May 31, 2011

Help documentation: The Help documentation will be generated in accordance with the system development process. In fact, the latter will incorporate tools that capture screens and text for efficient creation of Help documentation. The organizational structure of the Help capability will include tutorials, system process flow, screen functionality, statistical and non-statistical terms and definitions. Analysts will be able to search by topic, keyword, or hotlink. The Help text will be reviewed and approved by subject matter experts.

System	Begin Date	Completion Date
Data Preparation Module (includes database development and shared data operations)	October 31, 2010	November 30, 2010
STIP	October 31, 2010	December 31, 2010
LTIP	March 31, 2011	April 30, 2011
MicroMatrix	January 31, 2011	February 28, 2011
Skills-Based Projections (& Report Manager)	March 31, 2011	April 30, 2011
Occupational Descriptor	March 31, 2011	April 30, 2011

Implement Automated Tools and Capabilities to Estimate Green Employment Demand: A

critical initial activity in this deliverable is to take an inventory of prior and current national and state level research to designate green industries, occupations and skills. This set of research findings will be extended to include activity that is being conducted in parallel through other ETA State LMI grants. Once again, the deliverable is not to propose a single set of cluster definitions for green jobs and work requirements. But, the Projections Consortium will build tools and capability within the projections suite infrastructure that grant users flexibility in articulating those definitions and to estimate current and projected demand based on those user-created definitions. Beginning with the data preparation software, users will be able to select customizable green industry identifiers and filter (aggregate) current and projected employment data within the industry projections modules for both the two- and ten-year horizons. Next, indicators of green occupations and occupational clusters will be integrated with the occupational projections modules and the MicroMatrix system. Users can select a subset of the green industries and examine all occupations, or select all industries and narrow the output to only green occupations. Regardless of the choice, the key point is user flexibility to investigate the “fit” between industries and occupations in the context of an emerging green economy. This

logic of fit applies as well to the Skills-Based Employment Projections software. The attention shifts from industries and occupations to occupations and skills. Once again, how well do green skills “fit” green occupations, and what are the implications of different “fit” criteria for the estimation of employment demand.

The development timeline for these tools and capabilities are integrated within the system development timelines identified in the system rewrite schedules. The project team will consist of subject matter experts on each of the software and the development staff that is responsible for the rewrite. The subject matter experts not only have accumulated state-level experience in modeling of employment demand, but, in some cases, provided the technical specifications for the initial system development of the current suite software.

### **Training Rewrite, Development and Delivery**

The Projections Consortium has identified several weaknesses of the current training system: classroom style training, a format which is expensive to deliver and difficult to offer; availability of qualified, expert state trainers, who are difficult to find and whose employer, typically a state LMI shop, must be willing and able to provide their services in-kind due to funding limitations; trainers are typically volunteers and professional analysts, not professional trainers; states must allow staff to travel for training, and; if a training has been recently provided, two years can pass before the Projections Consortium is able to offer another course due to limited resources.

A goal of the training redesign is to move the majority of training to an e-learning environment to facilitate instructor led training or to allow state analysts to take the course at their leisure.

Under the proposed system, for instance, a course could be scheduled to allow an instructor to lead state analysts through a webinar on long-term projections methods. When a state is unable to schedule an analyst to attend, a recording of that webinar will be available to states.

Additionally, plans will be developed to incorporate a Projections track into the annual Labor Market Information Forum or another annual conference to allow state analysts to come together, reinforce learning, and develop personal networks to be drawn on for problem solving.

Six existing courses will be redesigned to an e-learning environment and courses will be developed on the new Skills Based Projections and Occupational Descriptor modules.

Additionally, a technical manual will be developed for use by projections analysts as a reference throughout and after completion of the training process. The LMI Training Institute will manage the process of engaging curriculum developers and web designers, developing protocols for testing curriculum materials, engaging trainers to conduct initial field tests of the training, scheduling field tests of the training curriculum targeted to LMI program staff and selected data users, as well as integrating the results of those field tests in the adaptation of the training for future delivery. The Projections Consortium and the LMI Training Institute will develop a plan for the Institute to regularly offer this new projections training program to state analysts.

Existing Training to be Redeveloped:

Estimates Delivery System (EDS): Analysts develop skills in the use of the EDS software to create and review customized occupational staffing patterns using data from the Occupational

Employment Statistics program for any county based geography within their state. These staffing patterns are imported into the MicroMatrix system to develop occupational projections.

Data Preparation: Analysts build skills in the use of data preparation software to develop historical data series as input to both short and long-term industry projections software.

Short -Term Projections Methods: Analysts develop skills in statistical methods used in the Short-Term Industry Projections System software.

Short-Term Industry Projections System: Analysts build skills in developing timely and comparable short-term industry projections, focusing on the impact of business cycle change on employment. This session will include training on new features related to green occupations.

Long-Term Industry Projections System: Analysts build skills in the production of sound long-term industry employment projections, reviewing methodologies and focusing on the impact of structural employment change in the economy. This session will include training on new features related to green occupations.

MicroMatrix System: Analysts develop skills to produce occupational employment projections and analyze results through the MicroMatrix system. The session will include training on new features related to green occupations.

New Training:

Skills-Based Projections: Analysts develop skills in the use of the Skills Based Projections software and output evaluation. An overview of O\*Net and its role in skills forecasting as well training on green skills related features in O\*Net and the SBP software will be provided.

Occupational Descriptor Training: Analysts build skills in the use of the Occupational Descriptor module, which allows for conversion of projections from a quantitative (e.g. openings for

Registered Nurses from 2008 to 2018 will average 507 per year) to a qualitative (e.g. Nursing will grow much faster than most occupations) output.

Develop a sustainability plan for training delivery: Working with the Projections Consortium, the LMI Training Institute will develop a plan to sustain and deliver projections training into the future.

## **DELIVERABLES**

- 1) The current Projections Suite software will be rewritten to a new, contemporary software platform. The rewrite activity will be comprehensive of greater integration in the internal design of suite components, realizing efficiencies in the database design, maximizing the system graphics, and engineering flexibility to function well with different Microsoft operating systems.
- 2) The Skills-Based Projections tool will be completed and fully integrated into the Projections Suite, allowing states to routinely provide updated skills projections to customers.
- 3) The Occupational Descriptor module will be completed and fully integrated into the Projections Suite, allowing states to convert projections output from a quantitative to a qualitative format.

- 4) Activities under this grant proposal will incorporate within the Projections Suite software components automated tools and capability to create user-defined green job industry, occupational, and skills clusters for the purpose of estimating current and projected green employment demand.
- 5) A comprehensive Projections Training Program will be completed to build capacity in state projections analysts on software use and methodology.
- 6) A plan will be completed to leverage current Labor Market Information infrastructure to sustain Projections Training relevance, timeliness and delivery.
- 7) A plan will be completed to provide a Projections track as part of the annual Labor Market Information Forum, or another annual conference, offering state projections analysts a venue for face-to-face learning and peer networking opportunities.

Software tools will be delivered to state labor market analysts via the World Wide Web. Training opportunities for state projections analysts will be delivered using the World Wide Web, the LMI Forum and the LMI Training Institute infrastructure.

STATE LMI IMPROVEMENT THROUGH  
PROJECTIONS INFRASTRUCTURE MODERNIZATION

PART III. ATTACHMENTS TO THE TECHNICAL PROPOSAL

Abstract  
Lead and Participating States

## ABSTRACT

Applicant Name: Nevada Department of Employment, Training and Rehabilitation

Project Title: State LMI Improvement through Projections Infrastructure Modernization

Area Served: This project will serve the nationwide workforce development system

Funding Requested: \$3,753,000

The Projections Consortium proposes to 1) modernize the Projections Suite and the Projections Training Program to improve and sustain states' ability to provide information on current and future industry and occupation demand, 2) develop new tools and training to allow states to routinely provide information on current and future skills demand developed in the context of the O\*NET framework, 3) provide enhancements to current tools and training and include features in new tools and training to allow states to provide information on current and future demand of green industries, occupations and skills, and 4) develop a plan for efficient delivery of a multi modal approach to projections training.

The outcome of this effort will be a modernized Projections infrastructure. This infrastructure will provide the nation's employment statistics system with the capacity and tools to deliver routinely refreshed current and future demand information on industries, occupations and skills specific to the green economy. Workforce system, education and economic development partners will have timely, comprehensive intelligence on the green economy to integrate into the labor exchange system.

## **State LMI Improvement through Projections Infrastructure Modernization**

### **Lead State –**

Nevada Department of Employment, Training and Rehabilitation

### **Participating States –**

Colorado Department of Labor and Employment

Florida Agency for Workforce Innovation

Illinois Department of Employment Security

New York Department of Labor

North Carolina Employment Security Commission

Texas Workforce Commission

Utah Department of Workforce Services