Illinois State Board of Education

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Jesse H. Ruiz
Chairman

Christopher A. Koch, Ed.D.
State Superintendent of Education

March 2009

TO: Eligible Applicants

FROM: Christopher A. Koch, Ed.D.
State Superintendent of Education

SUBJECT: **REQUEST FOR PROPOSALS (RFP):** Illinois Mathematics and Science Partnership Program

General Information

Eligible Applicants: Partnerships comprised of an engineering, mathematics or science department of a public or private institution of higher education (IHE) and a high-need Illinois local education agency (LEA) (i.e., public school district or private school) are eligible to apply. Partnerships may also include teacher-preparation departments as well as other engineering, mathematics or science departments, additional LEAs, businesses, and nonprofit or for-profit organizations as applicable

For purposes of this RFP, an eligible high-need LEA must meet all three of the following criteria in order to participate in a partnership.

- Annual or trend data from the Illinois Standards Achievement Test (ISAT), Prairie State Achievement Examination (PSAE), norm-referenced tests, and/or criterion-referenced tests that show achievement in mathematics and/or science is falling below 50 percent of students meeting or exceeding the Illinois Learning Standards, as disaggregated by factors such as socio-economic, gender, ethnicity, etc.
- Fifteen percent of the children served by the LEA are from low-income families or 6,500 children served by the LEA are from low-income families.
- The LEA has teacher quality issues, such that not all teachers of mathematics and science hold full or appropriate endorsement, or they are placed in teaching assignments that are beyond their expertise and experience levels.

Grant Award: Funding for the implementation of the IMSP will not exceed $250,000 per fiscal year with an additional $50,000 available in FY 2012 to refine the program for partnership sustainability and conclude the required evaluation.

Grant Period: The grant period will begin no sooner than September 1, 2009, and will extend from the execution date of the grant until August 31, 2010. Funding will be available for two additional fiscal years, contingent upon a sufficient appropriation for the program and satisfactory progress in the preceding grant period.

Letter of Intent: Eligible applicants are encouraged to submit a non-binding letter of intent to participate electronically to gdowney@isbe.net by March 31, 2009. This letter should include the proposed program to be implemented, principal LEA-district contact information, and the name and contact information for the IHE dean or provost designated as primary partnership contact. A template for the letter of intent is provided as Attachment 11. Modifications to the proposed partnership participants or individual partners may be made after submission of this letter.

Application Deadline: Mail the original and five copies to *Illinois State Board of Education, 100 North First Street, C-215, Springfield, Illinois 62777-0001, Attn: Gil Downey, Illinois Math Science Partnership*, to ensure receipt no later than **May 1, 2009**.

Proposals also may be hand-delivered to the following locations:

Springfield Office	Chicago Office
Information Center	Reception Area
1st Floor	Suite 14-300
100 North First Street	100 West Randolph Street

Online Bidders' Forum: There will be an online forum about the RFP. This forum can be found at http://www.isbe.net/curriculum/html/math.htm. All questions and answers will remain on the website until May 1, 2009. Applicants should carefully review these responses before submitting their proposals.

Should the conditions of this RFP change, the State Board of Education will post the changes at http://www.isbe.net/curriculum/Default.htm.

Contact Person: For more information on this RFP, contact Gil Downey by email at gdowney@isbe.net.

Background and Program Specifications

Title II, Part B, Sections 2201-2203, of the No Child Left Behind Act of 2001 (NCLB) authorizes the Mathematics and Science Partnerships (MSP) program as a means to improve teacher quality in these curricular areas. The intent of the program is to increase the academic achievement of students in mathematics and science by enhancing the content knowledge and teaching skills of classroom teachers. The U.S. Department of Education (USDE) provides relevant information about this program at http://www.ed.gov/programs/mathsci/index.html. Partnerships between high-need school districts and the education, science, engineering, and mathematics faculty in institutions of higher education are at the core of these improvement efforts.

This legislation directs partnerships to improve and upgrade the status and stature of mathematics and science teaching by encouraging institutions of higher education to assume greater responsibility for improving mathematics and science teacher education through the establishment of a comprehensive, integrated system of recruiting and training. The MSP program will bring mathematics and science teachers in high-need elementary and secondary schools together with scientists, mathematicians, and

engineers. Through the use of sophisticated laboratory equipment and work space, computing facilities, libraries, and other resources that institutions of higher education, business and industry are better able to provide than the elementary and secondary schools, teachers will be able to increase their subject matter knowledge of mathematics and science and improve their teaching skills.

In order to increase and support a talent pool in kindergarten through grade 12 (K-12) of high-quality teachers of mathematics and science, the Illinois State Board of Education (ISBE) will use federal Mathematics and Science Partnership funds to establish focused partnerships between institutions of higher education and high-need local education agencies. The Illinois Mathematics and Science Partnership (IMSP) program will authorize specialized, research-based, standards-led graduate programs leading to a master's degree to enable elementary and secondary mathematics and/or science teachers in high-need LEAs to meet the qualifications for applicable teaching endorsements in science and/or mathematics. The innovative design of this program will be based upon the findings of a needs assessment conducted with the teachers and administration of the LEA.

A primary focus of the design and implementation of the IMSP program should be to take teachers from high-need schools (as defined previously) and support them in improvement of content and pedagogy in an innovative graduate degree program in order to initiate an immediate and sustained improvement in student achievement. The graduates of the IMSP programs then should assume leadership roles in their school to be an integral part of the overall improvement of teaching and learning by modeling best practice, leading professional development and initiating research efforts into current educational issues.

Partnership Composition

Each proposal should be collaboratively developed by a team composed of administration, faculty, and staff from each of the IHE mathematics, science, and/or engineering divisions and the high-need LEA (e.g., district or building administrators, teachers). It is highly recommended that schools of education be an applicant partner or be integral in the proposal development process. Priority consideration in the proposal review process will be given to innovative proposals that utilize a broad based, interdisciplinary collaboration to develop and implement the proposed project.

In the course of developing the proposal, the partnership team will:

- conduct a comprehensive assessment and analysis of the needs of the participating teachers in those LEAs;
- propose an innovative graduate teaching program that will meet the needs identified and produce "highly qualified" and highly effective teachers with strong leadership potential;
- identify recruitment strategies and provide support to ensure participants complete the program and obtain their endorsements or complete the coursework;
- develop a plan to evaluate the levels of integration of new instructional strategies by the teachers in the cohort as demonstrated by at least three data sources, as well as the impact on student achievement as demonstrated by results of Illinois Standards Achievement Test (ISAT) and/or the Prairie State Achievement Examination (PSAE) as well as other local assessment instruments; and
- outline implementation roles and responsibilities of the team and others for implementing and evaluating the program through August 31, 2012.

Each applicant must designate a member of the applicant partnership who has expertise in evaluation processes who will be responsible for designing, collecting, compiling, and analyzing the formative and summative elements of the evaluation. Each project must provide required data to ISBE's external evaluator as requested. The applicant must determine the responsibilities of the evaluator to serve in

this capacity, who may be internal or external to the IHE. The evaluator must be qualified in statistical analysis and quantitative research. The proposal shall provide qualifications of the evaluator.

Postsecondary Participants: The partnership should encourage networking and expansion of its membership among and between the applicant IHE's divisions of mathematics, sciences, engineering, and education to ensure educational leadership and educational evaluation expertise.

LEA Participants. The LEA participants could include teachers and their administrators. Each of these members must commit to building and sustaining the program for the full term of the grant. The applicant LEA(s) should participate as a full partner(s) as the proposal is developed and assist in development of and conducting the needs assessments for teachers, as required by the MSP legislation (see page 5).

The applicant LEA should encourage its administrators to recruit elementary and high school math, science and engineering teachers and/or require the participation of teachers with leadership potential, less than ten years of experience, and fewer than five graduate courses in mathematics or science content or educational methods. The school district's participation in the IMSP program should align with the activities articulated in its Illinois Local School District Annual Report for Not-Highly Qualified Teachers (http://www.isbe.net/certification/pdf/NHQT_form.pdf) to ensure that all of its teachers are highly qualified, as well as align with the activities identified in the "roadmap" for each teacher not yet highly qualified who will be participating in the partnership's program (http://www.isbe.state.il.us/certification/pdf/RMNQT_form.pdf).

Others. Partners also may include the Regional Offices of Education (ROEs) and Intermediate Service Centers (ISCs). These entities may provide connections to an established network of teachers (for component pilot testing, possible comparison group participation, etc.) and administrators; local grants management expertise; and experience in curricular, instructional, and assessment resource implementation. Partnerships may include scientists, mathematicians, engineers, and other professionals from businesses, industries, or nonprofit or for-profit organizations with demonstrated effectiveness in improving the quality of mathematics and science teachers. These partners may be able to provide content mentoring by professionals from their organizational settings.

Project Development

Applicants that are awarded the FY 2010 IMSP grant are expected to successfully implement their innovative programs in the fall of 2009 with a cohort comprised of a minimum of 25 teachers with an Illinois teaching certificate who are assigned to K-12 math, science and/or engineering classes.

When developing the proposal for the IMSP graduate teaching program, each applicant must incorporate objectives and activities that will help achieve the three IMSP goals, which are to:

1. Improve teachers' subject matter knowledge, strengthen the quality of mathematics and science instruction, and promote student academic achievement in mathematics and science;
2. Promote strong teaching skills through access to the expertise of mathematicians, scientists, and engineers, and their technologies and resources, including integrating reliable scientifically based research teaching methods and technology-based teaching methods into the curriculum; and
3. Increase the understanding and application of scientifically based educational research to mathematics and science teaching and learning.

Each applicant must develop a proposal for a graduate teaching program that meets institutional and state requirements for teacher preparation programs, and federal requirements for IMSP. The proposal must integrate content knowledge of mathematics and science with the appropriate and innovative pedagogical content knowledge. It must interweave leadership skills and educational research foundations with classroom applications. In order to receive an IMSP grant, the applicant must present evidence in its proposal that the IHE where the program will be implemented has approved the proposed project. (NOTE: Approval of the proposal for funding will constitute the required approval by ISBE.)

Each partner must provide commitments to participate in the program through the end of the funding period.

Project Requirements and Options

Proposed programs should align directly with the Illinois Learning Standards for K-12 science and/or mathematics content as well as addressing alignment to the Illinois Teaching Standards.

The processes, principles and concepts of mathematical inquiry and problem-solving, scientific inquiry, and engineering design must be essential elements of the proposed project. The current and projected research frontiers of mathematics, science and engineering must be interwoven into these essential elements. The learning settings must enable teachers to focus on understanding and applying scientifically based educational research on the teaching and learning of mathematics and science. Directed attention to formative and summative assessment, analysis, and evaluation strategies in classrooms should be interwoven throughout the sequence of the program for the participants, as well as the project itself.

The design of the new, innovative graduate program must incorporate options that are flexible so that the program can address the actual and perceived needs of the LEA teachers and their administrators. The partnership proposal should have analyzed course content and refined current courses and prerequisites for traditional mathematics and science course participation and syllabi development, as well as staff assignments, so that they are applicable to the classroom expertise and needs of teachers in high-need LEAs.

IMSP applicants must consider the following required components and allowable activities as they develop the options to be included in the graduate teaching program. Any activities considered must stimulate the teachers' intellectual growth and upgrade their knowledge, skills, and qualifications, enabling participants to complete graduate coursework and/or meet requirements for an endorsement necessary to be considered highly qualified. Proposals should consider the use of a diversity of instructional strategies in the graduate program in order to strengthen the experiences of and knowledge of the participating teachers of the innovative pedagogical approaches to teaching and learning in the K-12 classroom. An applicant need not include all of the allowable activities in its proposed project equally, but should include those that will best meet the goals of the partnership and the needs of participating teachers.

<u>Comprehensive Needs Assessment</u>. The MSP legislation requires a comprehensive needs assessment be conducted to determine teacher quality and the professional development needs of the participating LEAs. As part of the development of its proposal, the applicant must identify baseline data that will be required for evaluation of the progress of the IMSP and will contribute to informed decision-making for mathematics and science education issues as the project is implemented. The collection of data used for the needs assessment should continue to be gathered periodically throughout the grant cycle to track

progress. Grantees must incorporate all costs associated with assessing needs into the budget for each fiscal year.

Aligning to State Standards. The IMSP proposal requires that all proposed activities be aligned to the Illinois Learning Standards (ILS) (see http://www.isbe.net/ils/Default.htm) in mathematics and science and the Illinois Professional Teaching Standards (IPTS) (see http://www.isbe.net/profprep/pcstandardrules.htm). To enhance the proposal, grant activities should also be included to take into account the established state requirements for applicable endorsements for elementary and secondary mathematics and science. These requirements can be found in Section 25.100 of rules governing Certification (see http://www.isbe.net/rules/archive/pdfs/25ark.pdf) and for the middles grades, Section 1.720 of rules governing Public Schools Evaluation, Recognition and Supervision (see http://www.isbe.net/rules/archive/pdfs/oneark.pdf).

Use of Technology. The proposed project should incorporate state-of-the-art technologies used by scientists, mathematicians, and engineers as well as advanced educational technologies. The federal legislation specifically emphasizes incorporating the use of technologies in the classroom. The use of the technologies of scientists, mathematicians, and engineers are of primary importance; the use of educational or instructional technologies can be of importance pedagogically. The strategy of incorporating distance-learning options to maximize cost-effectiveness and expand the professional development opportunities for teachers is also emphasized in the legislation. The distance-learning options may include using curricula that are innovative, content-based, and based on current scientifically based research.

Leadership Skills and Talents. The federal legislation emphasizes preparing project participants to provide professional development through mentoring or coaching to other mathematics or science teachers if participants can effectively integrate their experiences from MSP activities and their own classrooms. The development of applicable leadership skills and talents should be included throughout the proposed educational experiences for teachers.

Use of Data and Assessments, and Action Research. Federal legislation specifically permits the program to include instruction in the use of data and assessments to inform classroom practice and curriculum alignment. In order to accomplish the third IMSP goal (see page 4) and provide a common methodology for the demonstration of mastery of IMSP goals, ISBE has required use of action research for all IMSP teacher participants. Each partnership must incorporate requirements for action research by its participants so that teachers can design, implement and complete action research projects to determine the effectiveness of their IMSP learning in their own classrooms. Proposed projects must include instruction and guidance in the components associated with action research. Action research projects may take place throughout the course of the program or be the culminating activity for the graduate program.

Evaluation Plan Overview

The federal legislation requires an evaluation plan that measures the impact of the activities on the population served. The proposed plan must include:

- Measurable objectives to increase the number of math and science teachers who participate in content-related professional development activities; and
- Measurable objectives for improved student academic achievement on the state's math and science assessments.

The legislation also allows the inclusion of objectives and measures that address whether there has been increased participation by students in advanced courses in mathematics and science; increased percentages of elementary school teachers with academic majors or minors, or group majors or minors, in mathematics, science, or engineering; and increased percentages of secondary school classes in mathematics and science taught by teachers with academic majors in mathematics, science, and engineering.

The state evaluation plan will also include measures of the impact of the project on the teacher's ability to integrate scientifically based instructional strategies into his or her classroom. The evaluation plan must include baseline and trend data from the schools and districts participating in the IMSP of students' mathematics and science achievement from the past two to three years (e.g., ISAT, PSAE, local criterion-referenced test data). The evaluation plan must collect and use the participating teachers' student mathematics and science achievement data for each year of the project as a measure of the program's effectiveness.

The research hypothesis for all projects in the IMSP program is that improved mathematics and science content expertise and improved pedagogical skills leads to higher teacher quality and greater student achievement. The impact at the partnership level should be expressed in terms of the improvement of teacher content expertise and connected to the stimulated or accelerated improvement of student content achievement on state and local assessment measures. The former should be derived, in part, from valid pre- and post-assessments of content knowledge of the participating teachers.

The ISBE-contracted Evaluation Coordinator will work with each grantee and/or its corresponding internal evaluator or the evaluator hired under a subcontract, in the conduct of the evaluation and will provide technical assistance for common evaluation elements and methodologies, control group decisions, and other evaluation design elements. Additionally, the statewide Evaluation Coordinator has responsibility to conduct site visits and gather data to determine the overall effectiveness of the IMSP.

All successful applicants must provide data sets, reports, and other artifacts and materials to the Evaluation Coordinator. Site visits by the Evaluation Coordinator and ISBE staff will be scheduled. Summary reports about all Illinois projects will be compiled by the Evaluation Coordinator each fiscal year of the project.

Each grantee must develop a portfolio as a final partnership product. The portfolio must include the evaluation of the program and various artifacts that can document the effectiveness of the project in the individual classrooms, buildings, districts, and postsecondary settings. The portfolio also must include information about the roles of the partners and their impact on the learning community of the project. All partners must participate in the development of this portfolio. The portfolio will be submitted to ISBE at the conclusion of the grant period. The portfolio of evaluation findings will be reviewed for possible utility in state-level identification of promising policies and practices.

Each of the Illinois Mathematics and Science Partnerships is required by federal legislation to submit annual performance reports through the USDE's electronic reporting website. ISBE has a formal review process that requires completed Annual Performance Reports (APRs) 60 days prior to the federal deadline. As a part of its national evaluation, the USDE will provide instructions to each Illinois partnership for the electronic submission of this report.

Training and necessary updates for completing the APR will be provided as needed.

Fiscal Information

Approximately $3.75 million will be available for FY 2010 to implement Illinois Mathematics and Science Partnership (IMSP) graduate teaching programs.

Funding may be used for personnel expenses associated with project activities. Allowable expenditures include the following:

- Tuition waiver for teacher-participants.
- Textbook, supplies, materials for teacher-participant action research.
- General Administration Activities for project administrative responsibilities. When the same individual has multiple responsibilities or roles, the services of that individual should be prorated among the proper areas. This line is capped at 10 percent of the total award.
- Research, Development, and Evaluation Services
  - Reasonable and customary development and implementation costs for salary increments, benefits, and/or stipends for appropriate dedicated coordination time by Partnership Team members.
  - Intra- and inter-partnership meeting expenses, including travel reimbursement, necessary materials, supplies, and team registration at each collaborative meeting.
  - Expenses to cover a representative team (one or two members) to attend one out-of-state coordination meeting organized annually by the USDE; no other details were available at the time of the release of the RFP.
  - Preparation and completion of MSP evaluation portfolio as well as state and federal reports.
- Transfers to other governmental agencies
  - LEA team costs, including stipends, substitute reimbursements, benefits.

No indirect costs are allowed; direct costs may be approved to cover actual fiscal administration, space rental costs, communications, and copying.

Funds received must be used to supplement, not supplant, funds that would otherwise be used for proposed activities.

For purposes of compliance with Section 511 of P.L. 101-166 (the "Stevens Amendment"), applicants are advised that 100 percent of the funds for this program are derived from federal sources. The total amount of federal funding involved for FY 2010 is approximately $3.75 million.

Proposal Format

Each proposal must be submitted in the format outlined below. Use Times New Roman font, size 11 or 12. Please use the following as a checklist in assembling your completed proposal.

____ **1. Partnership Cover Page (Attachment 1)**: Must be signed by the official authorized to submit the proposal as fiscal/administrative agent. Each partnership must designate a member of the partnership to serve as the fiscal/administrative agent for the grant. The signature of the authorized official of each entity participating in a partnership attests to its agreement that the entity designated as the fiscal/administrative agent will act on behalf of individual partners in the conduct of the grant. It further assures that each partner will meet the terms and conditions of the grant, as outlined in the approved proposal.

___ **2. Partnership Commitments (Attachments 2A and 2B)**: Complete the attached forms to indicate the commitment of the IHE and LEA to designing, implementing, and sustaining a graduate teaching program as a mathematics and science partnership.

___ **3. Proposal Abstract Worksheet (Attachment 3)**: Provide required information.

___ **4. Proposal Narrative**: Narratives should be limited to 15 pages. Chart formats are acceptable, as applicable. Respond clearly to each of the following items below in the order in which they are presented.

A. Partnership. Indicate the composition of the partnership and the role of each member of the team in developing the project proposal, and in its implementation and evaluation. Provide resume or describe qualifications of participants.

B. Needs Assessment. Describe the process used to conduct the comprehensive assessment of teacher quality and professional development needs of the LEA(s) participating in the project. Indicate the data analyzed to determine need. Summarize the results of the needs assessment and how that information was used to develop the proposed project.

C. Proposed Program. Identify the IMSP graduate teaching program to be implemented, its established endorsement requirements and the innovative design elements that will be included in order to meet or exceed the IMSP program goals. Include a timeline detailing the specific courses to be offered as part of the graduate program. Explain how the design will meet the specific and general needs of the participating LEAs. If applicable, discuss further refinements that will be needed as implementation begins.

On a separate page, provide a course description, method of delivery (i.e. classroom, on-line), and indicate if the course is new, existing with refinement or existing). On a separate page, include qualifications of teachers in the proposed program and the courses they are slated to teach.

Provide evidence that the project design is aligned to the Illinois Learning Standards by indicating the standards and specific knowledge and performance indicators that will be addressed, assessed and evaluated. Describe other educational reform activities that promote student academic achievement in mathematics and sciences to which the project is aligned. Summarize the mathematics, science, and/or engineering education research and research-based models that were considered in developing the proposed program.

Explain how the proposed project will contribute to improvements in teaching and learning.

Include a description of the state-of-the-art technologies that will be addressed and how those will be incorporated into the classroom. Also include the strategies that will be employed to assist participants in encouraging exploration of mathematics, science, and/or engineering careers by their students.

D. Leadership Skills and Talent. Describe the steps to be taken to enable participants to provide professional development through mentoring or coaching to other mathematics, science and engineering teachers.

E. Sustainability. Describe how the program will be continued when federal funding ends, including resources that will be leveraged or contributed to maintain the scope of the project and to ensure that participants complete the program.

F. Evaluation. Indicate which partner will conduct the evaluation or if it will be conducted by an entity external to the partnership. Provide a detailed description of the scientifically based research methodology and metrics to be used and data to be collected to determine the extent to which activities funded under this grant have been effective in improving mathematics and science teaching and learning. Include the formative benchmarking checkpoints and measures for progress and necessary refinements. Indicate how the partnership will ensure its participation in state and federal reporting and evaluation efforts. Propose protocols and strategies that may be incorporated to validate the progress and challenges of the project and meet the targeted benchmarks of the IMSP (see Appendix A). Explain how the results of the evaluation will be used to improve and refine the program. Each project must provide required data to ISBE's external evaluator as requested. Provide list of cohort members, school, grade level and subject taught. This list should be provided on a separate document.

____ **5. Budget Summary and Payment Schedule (Attachment 4)**: Must be submitted on the form provided and signed by the district superintendent or official authorized to submit the proposal. The payment schedule should be based on the projected date of expenditures. Salaries and fringe benefits should be requested in equal intervals on the schedule. Supplies, equipment, contracted services and professional development should be requested in the month for which the expenditure is anticipated.

____ **6. Budget Narrative (Attachments 5)**: Must include descriptions of the anticipated expenditures, correlated to the line items set forth on the Budget Summary. Must include subcontract information, if applicable (see item 7 of the document titled "Certifications and Assurances, and Standard Terms of the Grant," Attachment 6).

The Budget Narrative must include subcontract information, as applicable. (See "Certifications and Assurances, and Standard Terms of the Grant," item 7).

Partnerships grantees will submit subsequent budget(s) for FY 2011 (and FY 2012 if awarded) as part of their continuation applications.

___ **7. Certifications and Assurances** : Each applicant, ***including each entity that is participating in the partnership***, is required to submit the certification forms listed below and attached to

this RFP. These must be signed by school district superintendent (in the case of the LEA partner(s)) and for nonschool district partners, the official legally authorized to submit the proposal and to bind the applicant to its contents.

- **Certification and Assurances, and Standard Terms of the Grant** (Attachment 6).
- **Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion** (Attachment 7).
- **Certification Regarding Lobbying** (if the proposed amount exceeds $100,000) (Attachment 8).
- **General Education Provisions Act** (Attachment 9): Include a statement of how the Mathematics and Science Partnerships program will promote equity, including a description of the steps the applicant proposes to take to overcome barriers to equitable program participation for students, teachers, and other beneficiaries with special needs, as required under Section 427 of the General Education Provisions Act.
- **Program-Specific Terms of the Grant** (Attachment 10).

Criteria for Review and Approval of Proposals

Proposals will be selected based on rank, using the criteria listed below. Total possible points is 100. Proposals will be considered ineligible if not submitted in the format set forth above.

Assessment of Need (20 points) – The proposal adequately addresses a specialized, research-based, standards-led graduate program leading to a master's degree designed to enable elementary and secondary mathematics and/or science teachers in high-need LEAs to meet the qualifications for applicable teaching endorsements in science and/or mathematics. The design of the program is based on the findings of an assessment of the needs of the LEA's teachers and administrators.

Quality of the Proposed Partnership (20 points) – The proposed partnerships among institutions of higher education, high-need local education agencies and business, as applicable, bring mathematics and science teachers in high-need elementary and secondary schools together with scientists, mathematicians, engineers, LEAs, and business professionals, leading to improvements in teaching and learning. Proposed partners have sufficient expertise, experience, and commitments to the partnership to meet the goals of the Illinois MSP.

Quality of Proposed Program (25 points) – The proposed design of the IMSP program has a high likelihood of being successfully implemented. The goals of the IMSP are clearly developed within the activities described in the proposal. The diversity and innovation of the design elements encompass and build upon existing mathematics and science education research and expertise. The proposed timeline for implementation meets the necessary IMSP timeline requirements.

Evaluation (20 points) – The evaluation design will provide evidence of the impact of the IMSP program on the participating teachers' instructional strategies and the mathematics and science achievement (with particular emphasis upon ISAT and/or PSAE testing results) of students in their classroom. The proposed evaluation is aligned to and will provide required data for the state IMSP evaluation as indicated in Appendix B.

Cost-Effectiveness (15 points) – The proposed budget and rationale are consistent with the proposed activities and appear to be a cost-effective investment for the implementation of the proposed program.

Benchmarks: Illinois Mathematics and Science Partnership

The overall goal of the Illinois Mathematics and Science Partnership Program (IMSP) is to focus specialized professional development programs in mathematics and science to educators in high-need schools and school districts to enable these teachers to become more highly effective by successfully completing a graduate program resulting in the receipt of a master's degree. Benchmarks for evidence of success in this effort are provided below for each category of participants. Funded partnerships will use these benchmarks to establish incremental increases for each year of the project and to determine the documentation and analysis required to evaluate the impact of the graduate teaching programs through multiple, appropriate, valid, and reliable protocols.

Teacher-Leader Participants

- 50 percent cumulative increase in specific science and/or mathematics content expertise, including pedagogical content knowledge and leadership qualifications to be demonstrated through at minimum pre- and post-test methodologies, etc.
- 50 percent cumulative increase in confidence, effectiveness, and use of effective science and/or mathematics teaching skills, technologies, and applications to be demonstrated through self-reflective journals, interviews, and action research, and data trends, etc.
- 50 percent cumulative increase in application of findings, evaluation of personal use, and development of critical questioning skills for analysis of scientifically based educational research for teaching and learning mathematics and science to be demonstrated through reflections, journals, interviews, etc.
- 100 percent of participating teachers reaching status of highly qualified by receiving a master's degree and completing coursework necessary to meet qualifications for mathematics and/or science endorsements or to be become highly effective.

Partnering Local Education Agency (at building and/or district level)

- 30 percent increase in student performance in specific science and mathematics content areas using multiple formative and summative assessment analysis measures incorporated in cumulative action research analysis, including:
  - 30 percent increase in students' demonstration of achievement in the "meets expectations" category of Illinois' large-scale assessment measures;
  - 30 percent increase in students' demonstration of achievement in the "exceeds expectations" category of Illinois' large-scale assessment measures; and
  - At least 30 percent increase in students' demonstration of achievement through trend analysis of classroom-based, high-quality formative assessments and action research.
- 50 percent cumulative increase in measures identified for sustained excellence and support of content expertise in high-need LEAs, including:
  - 50 percent increase in administrative programmatic support measures for scheduling, preparation, and evaluating the quality mathematics and science teaching and learning, to be demonstrated through pre-post surveys and interviews, etc.
  - 50 percent increase in collaborative decision-making measures to improve the quality of mathematics and science teaching and learning, with specific focus on deliberate collegial connections to professional development among professional staff and resolution of issues associated with dysfunctional teaching and learning settings (teacher dissatisfaction, behavioral problems, etc.), to be demonstrated through pre-post surveys and interviews, etc.

Institutions of Higher Education

- 100 percent of participating IHEs committing to sustained program support beyond the term of IMSP funding:
  - Inter- and intra-college/department administrative support is documented by meeting minutes, letters of continuing support and interviews, etc.;
  - Deliberate connections to teacher preparatory programs and general education programs is documented by meeting minutes, program impact statements and design elements, and interviews, etc.

IMSP Evaluation Plan

The proposed evaluation plan will address the impact on teachers in terms of content knowledge and pedagogy and their ability to integrate scientifically based strategies into the teaching and learning in the classroom. The plan must also assess the impact on student achievement of the students in the classroom of the teachers in the program. The evaluation plan must include baseline and trend data from the schools and districts participating in the IMSP of students' mathematics and science achievement from the past two to three years (e.g., ISAT, PSAE, local criterion-referenced test data). Each project must provide required data to ISBE's external evaluator as requested.

IMSP Evaluation Plan will include the following:

- The partnership includes a member with sufficient expertise and experience in educational evaluation design and analysis to assure accurate and effective data collection and analysis.
- The evaluation plan clearly assesses the impact on teacher content knowledge as indicated by appropriate pre-test / post-test activities.
- The action plan states at least three data points measuring the implementation of newly acquired or developed research-based instructional strategies. (i.e. survey, journals, observation).
- The evaluation plan clearly describes specific tests, strategies and techniques to measure growth in student achievement. Measurements must include state assessments as a part of the growth measurement.

An annual report (APR) is required by federal legislation and is reported by entering required data on-line. Specific instructions for completing the APR will be provided to the grantees by the State Evaluator through a state evaluation conference.

Information concerning the data collected and past APRs is available at http://www.ed-msp.net/do/Welcome.