

# ISO 50001

Energy Management Systems

PERRY JOHNSON REGISTRARS

# Meeting Introduction Overview



Kick-Off Presenter  
Terry Boboige  
PJR President



Presenter  
Scott Jones  
Environmental Specialist



Presenter  
Shannon Craddock  
Programs and Accreditations  
Manager



Presenter  
Hugh Griffiths  
EMS and EnMS Auditor



- **Welcome From PJR Headquarters:**

PJR  
755 W. Big Beaver Rd, Suite 1340  
Troy, MI 48084  
Phone: 1-800-800-7910  
Email: PJR@PJR.com

- **Audience for today's meeting**

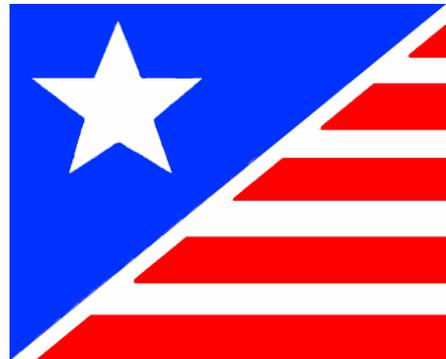
- **Introduction of speakers**

- **Today's Session (1 Hour)**

- Informational Standard Overview
- ISO 50001 Pilot Program
- Certification Body Networking Business Opportunities
- Role of Independent Consultants Going Forward
- Role of PJR Auditors Going Forward/Auditor Competency
- How the Certification Body (PJR) Determines ISO 50001 Costs and Man-day Quotes for Customers
- Seeking ANAB Witness Audit Candidates
- Lead Auditor Training for ISO 50001
- Questions

# Development of ISO 50001

- What is ISO 50001?
  - ISO 50001 is a new standard for energy management developed by the International Organization for Standardization (ISO).
  - ISO 50001 was published by ISO on June 15, 2011.



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# Development of ISO 50001

- Who is involved?

- ISO 50001 has been developed by the ISO project committee ISO/PC 242 with leadership from USA, Brazil, China and the United Kingdom.
- Forty-three ISO member countries have been participating in the work, with another 13 as observers.
- The US Department of Energy (DoE) has also been involved in the development of ISO 50001 through the US TAG, and as a member of the ANSI delegation to ISO/PC 242 meetings.



# Development of ISO 50001

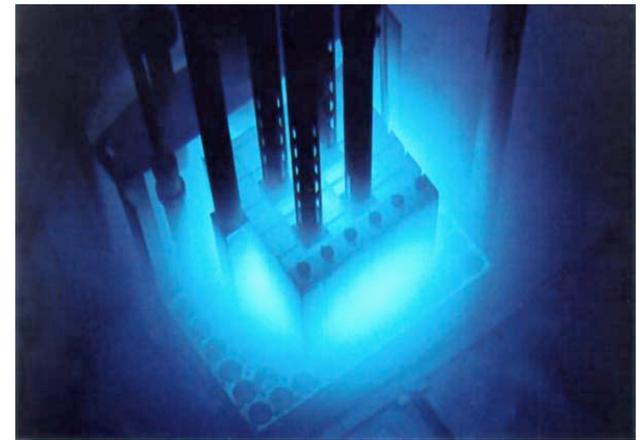
- USA Involvement

- The Georgia Institute of Technology is the technical lead for the DoE-ITP Energy Management Demonstration Programmes.
- EnMS Pilot - As of May 2011, some 25 companies across 14 US states were taking part, seeking to learn more about developing and implementing an energy management system that meets the highest standards in energy efficiency.
- PJR participated in the first EnMS Lead Auditor Training Course and Exam conducted on August 22, 2011 to August 26, 2011 at Georgia Tech.



# ISO 50001 Overview

- What is the purpose of ISO 50001?
  - ISO 50001:2011 gives organizations the requirements for energy management systems (EnMS) and provides guidance for use.
  - It is a systematic approach to set and reach organizational energy use and consumption goals.
  - To provide organizations with management strategies to increase energy efficiency, reduce costs and improve energy performance.
  - ISO 50001 is intended to be a framework for organizations to integrate energy performance into their energy practices.



# ISO 50001 Overview (cont'd)

- ISO 50001 intends to help organizations:
  - Better manage their existing energy-consuming assets.
  - Create transparency and facilitate communication on the management of energy resources.
  - Promote energy management best practices.
  - Evaluate and prioritize the implementation of new energy-efficient technologies.
  - Provide a framework for promoting energy efficiency throughout the supply chain.
  - Integrate an EnMS with other management systems.
    - Examples: environmental, health and safety.



# Potential Impacts of ISO 50001

- Could influence up to 60% of the world's energy use across many economic sectors!



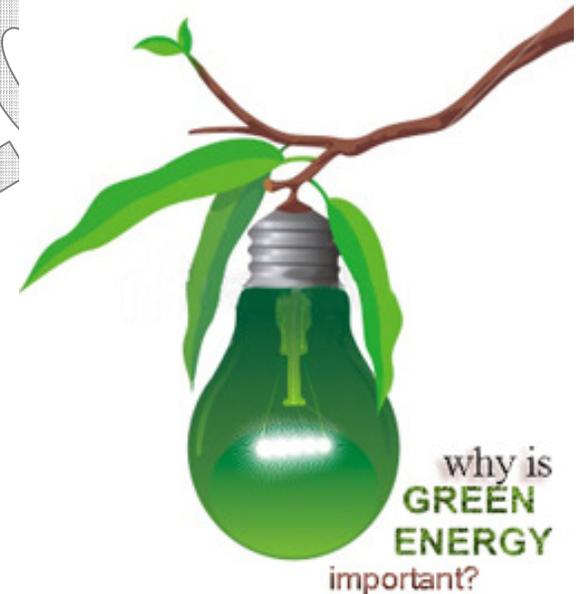
# Why is ISO 50001 Important?

- Energy is critical to organizational operations and can be a very large cost to the organization, whatever their activities. Therefore, an effective EnMS can help reduce energy costs to an organization.
- Energy use and consumption often impose environmental and societal concerns from depleting resources to contributing to problems such as climate change.



# Why is ISO 50001 Important?

- It is based on the management system model that is already implemented by organizations worldwide.
  - ISO 9001 and ISO 14001
- It can make a positive difference for organizations in the very near future, while supporting longer term efforts for improved energy technologies.



# What are the Benefits of ISO 50001?

- Some of the many benefits of ISO 50001 may include:
  - Realization of energy cost savings
  - Maximize the use of energy sources and assets
  - Reduced energy consumption
  - increased energy efficiency
  - increase energy performance



# What are the Benefits of ISO 50001? (cont'd)



- Additional benefits may include:
  - Reduced environmental impact
  - Helps to achieve energy compliance
  - Worldwide credibility for energy consciousness.
  - Able to be used by small to large organizations across diverse commercial, industrial, and public sectors.

# What are the Benefits of ISO 50001? (cont'd)

- Additional benefits may include:
  - Builds energy management into business practices
  - Improves operations and capital cost decisions
  - Improves the ability to set baselines, measure, monitor and report on energy performance
    - Energy performance = Measurable results related to energy efficiency, energy use and energy consumption.



# The Future of Energy Management

- In an effort to reduce energy consumption and greenhouse gas emissions, federal, state, and local regulations are being implemented across the US and worldwide.
- ISO 50001 provides the framework to not only reduce energy use and consumption, but also meet these mandatory regulations.
- In an effort to help organizations reduce energy use and consumption, a number of incentive programs are being offered.
  - For example, President Obama announced the Better Building Initiative in February 2011. This Initiative will provide tax breaks, grants and loans to private companies with the goal of making commercial buildings 20 percent more energy efficient by 2020.

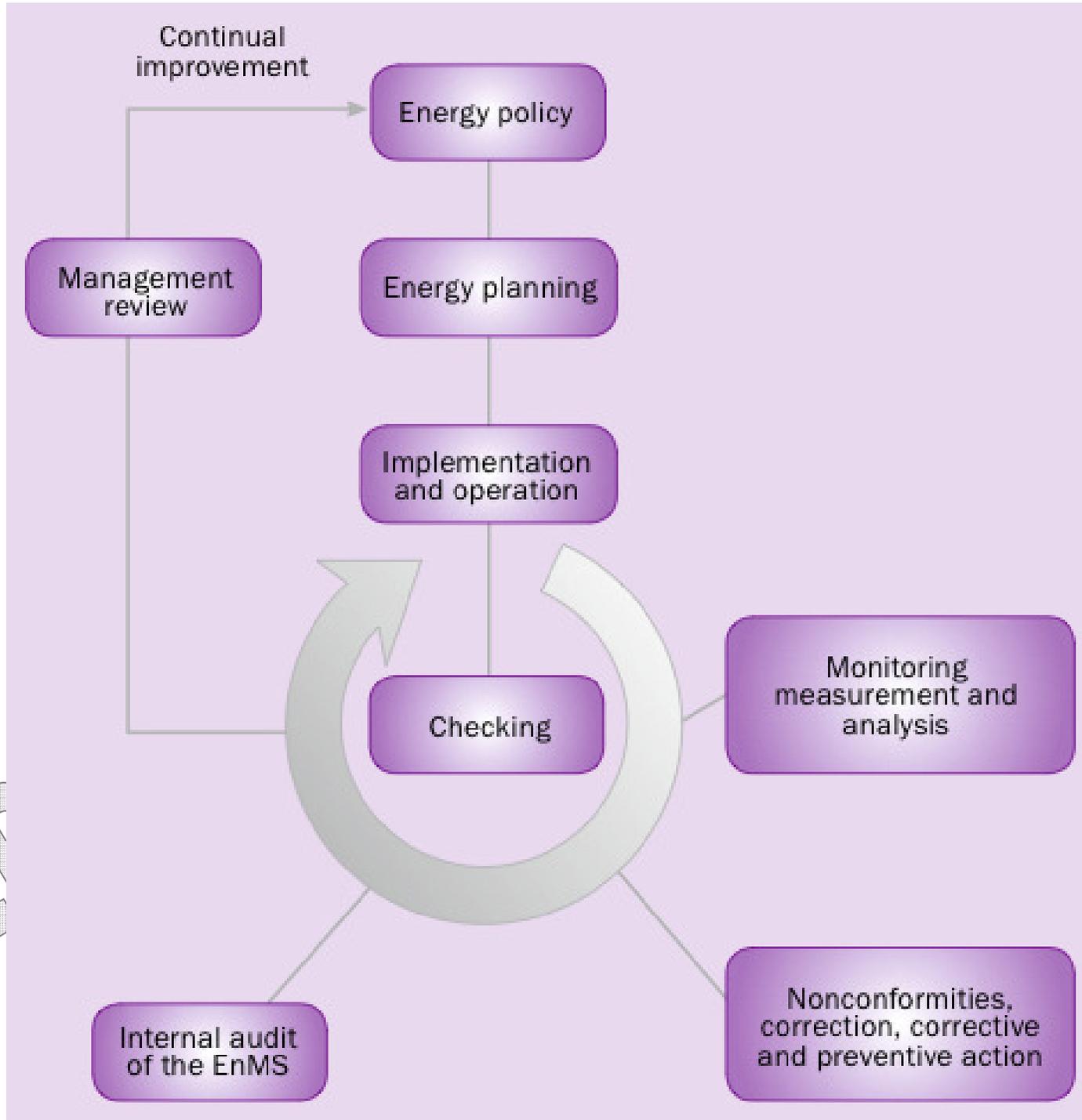


# ISO 50001 Requirements and Guidance for Use

- ISO 50001 follows the plan-do-check-act process for continual improvement of the EnMS.
- One key difference from other management systems is that an EnMS has a requirement that the organization shall achieve continual improvement of its **energy performance** and of its EnMS.

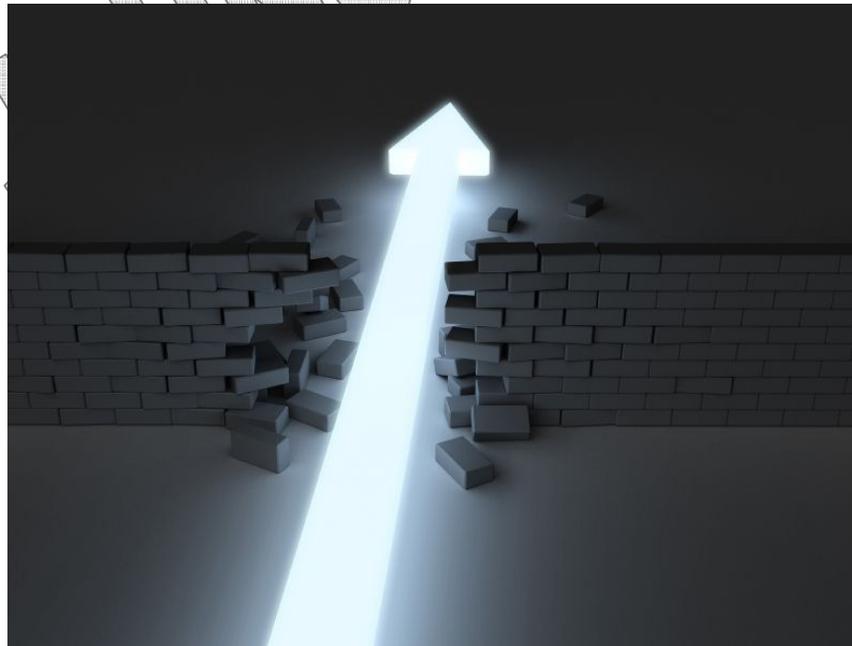


# Energy Management System Model



# EnMS Scope and Boundaries

- Scope: extent of activities, facilities and decisions that the organization addresses through an EnMS, which can include several boundaries.
  - Note: the scope can include energy related to transport
- Boundaries: physical or site limits and/or organizational limits as defined by the organization.
  - Note: a process; a group of processes; a site; an entire organization; multiple sites under the control of an organization.



# Energy Planning

In order to have an effective EnMS, the following should be considered during the planning stages:

Legal and other requirements



Energy sources



Past, current, future energy use and consumption



Significant energy uses



Opportunities for improvement



Baseline



Energy Performance Indicators (EnPIs)



Objectives, targets, and action plans

# Implementation and Operation – “Do”



- Action plans and other outputs of the planning process will be used for implementation and operation of the EnMS and shall include the following:
  - Competence, training and awareness
  - Communication
  - Documentation
    - Documentation requirements
    - Control of documents
  - Operational control
  - Design
  - Procurement of energy services, products, equipment and energy



# Checking

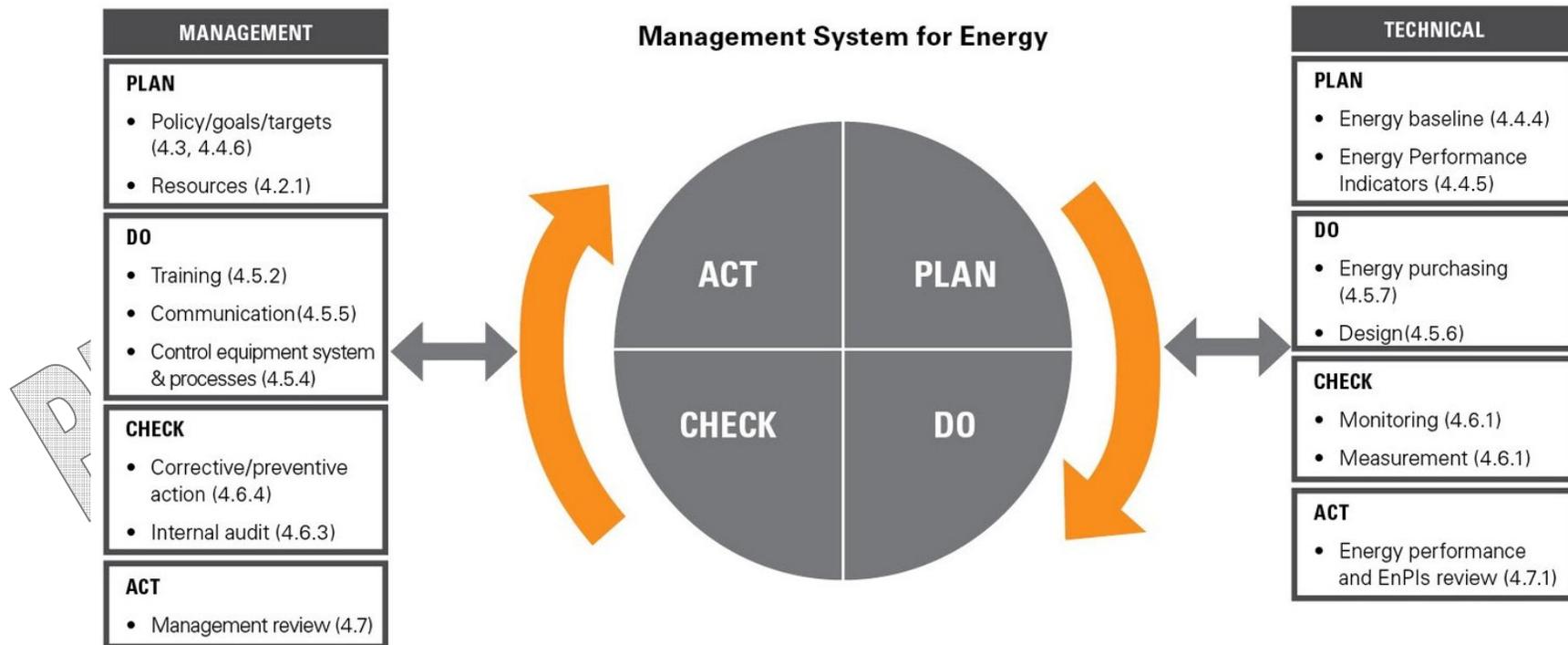
- The following items should be completed to ensure an effective EnMS:
  - Monitoring, measurement and analysis
  - Evaluation of compliance with legal and other requirements
  - Internal audit of the EnMS
  - Nonconformities, correction, corrective action and preventive action
  - Control of records



# Management Review - “Act”

- Management reviews of the EnMS should be completed at planned intervals to ensure its continuing suitability, adequacy and effectiveness and should include:
  - Input to management review
  - Output from management review

## ISO/DIS 50001 ENERGY MANAGEMENT SYSTEMS



# Benefits of Certification

- Intangible EnMS benefits include:
  - Improved corporate image among regulators, customers and the public
  - Proof of social responsibility
  - Improved employee morale



# Certification Process

- Perry Johnson Registrars, Inc. (PJR) provides the audit client with a proposal based on the size and nature of the organization. Once the proposal is accepted, the audit is scheduled.
  - Note: The audit schedule is currently “guided” by the IAF MD 5:2009 EMS audit duration schedule. An EnMS audit duration schedule is anticipated to be developed in the future.
- The initial audit consists of two stages:
  - Stage 1: This first part of the audit takes place on-site and consists of a document review of your EnMS to evaluate the readiness of your organization to move on to stage 2. Audit findings from the stage 1 audit will be presented to the client.
  - Stage 2: Scheduled 30 to 45 days after the stage 1 audit. This part of the audit will be on-site and will audit your entire EnMS. After the audit is completed, PJR will present findings, both positive and negative, to the client. Negative findings or nonconformities will need to be resolved prior to issuing of the certificate.
    - Note: the auditors only recommend for or against certification. A technical review committee will determine whether or not the organization will receive certification based on the auditor’s findings.

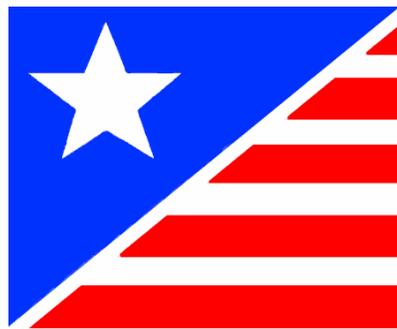
# Certification Process

- Upon certification, surveillance audits will be scheduled at either six or twelve month intervals depending on the contract. During the visits, we review the implementation of the action plan addressing the past nonconformities and examine certain mandatory and other selected parts of the system in line with an audit plan that we provide you before each visit.
- Prior to the third anniversary of the initial certification, our routine visit will be extended to enable a re-certification audit. Surveillance visits will then continue, as before, on a 3-year cycle.



# PJR and ISO 50001

- PJR is a full-service registrar leading the way in the ISO 50001 standard. Here are just a few reasons why PJR is at the top for ISO 50001:
  - PJR participated in the ISO 50001 beta Lead Auditor training course
  - Technical expertise to guide our clients in the field of energy
  - PJR is in the process of creating a training program for lead auditors and internal auditors
  - Provide flexibility
  - Always keep the client's best interests in mind
- For more information about PJR, please visit our website:
  - [www.pjr.com](http://www.pjr.com)

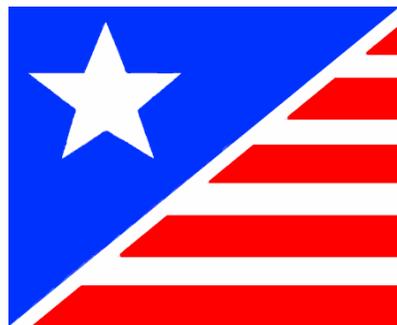


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# PJR and ISO 50001

- PJR is looking to establish a network with those interested in working with PJR in the development of our ISO 50001 program. Network to include:
  - Energy Consultants
  - Auditors
  - Technical Experts
  - Academia
  - Local, municipal, state and federal government organizations
  - Industry Groups
- If you are interested, please submit your request to:

Scott T. Jones  
Environmental Specialist  
Perry Johnson Registrars, Inc.  
Phone: (248) 358-3388 Ext 4761  
Mobile: (248) 302-3707  
Email: [stjones@pjr.com](mailto:stjones@pjr.com)



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# Questions

Please type any questions you may have.



PERRY JO

REGISTRARS

# Contact Information

For additional technical information, please contact  
Scott Jones.

Scott Jones

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For a quote, please contact  
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