



**BOOTH 1024**

# **2025 SOCMA - Catalyzing Innovations in the Chemical Industry Using Tax Credits**

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**How the Research and Development Tax  
Credit Can Benefit Your Company**

**Presented by:**

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# Agenda

- What Qualifies for R&D Tax Credit?
- R&D Tax Credit Myths
- The Four-Part Test
- Examples of Qualifying Activities
- Three Buckets of Expenses
- Payroll Tax Credit
- Section 174 – Recent Guidance
- Q & A

# Opportunity and Benefits

- Tax Credit is much larger than a Tax Deduction – \$1 for \$1 Reduction of Tax Liabilities
- R&D Tax Credit Lowers a Company's Effective Tax Rate
- Federal R&D Tax Credits May Be Carried Back 1 Year and Forward for Up To 20 Years
- Additional State R&D Tax Credits Are Available in Over 30 States, mostly with similar calculation methodologies as the Federal Credit
- Innovation Increases a Company's Competitiveness, Capabilities and Capacity
- R&D Tax Credits Continuously Help Fund Innovation



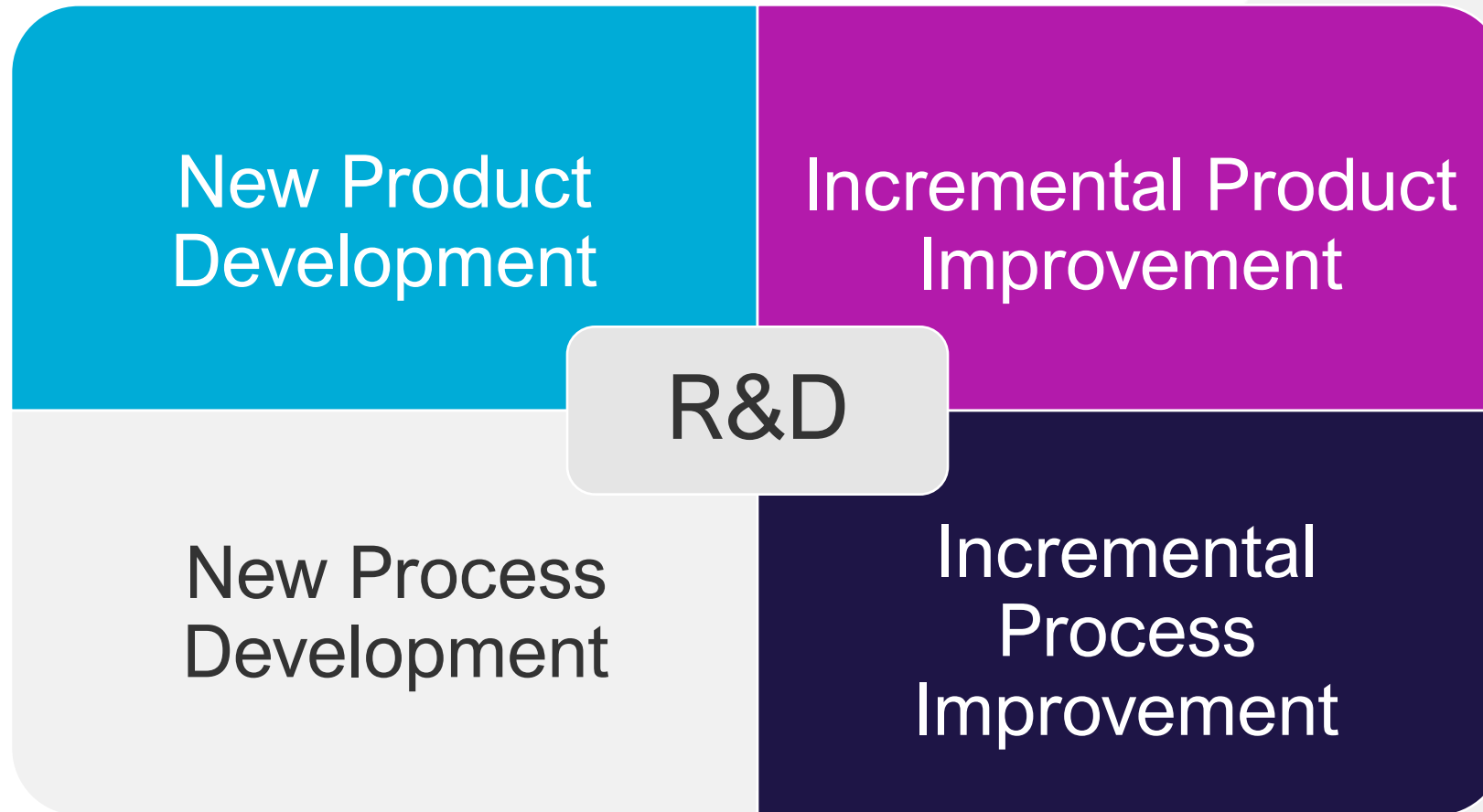
# R&D Tax Credit – Opportunities Overview

- **Federal Benefit** - The R&D Tax Credit also known as the Research and Experimentation (R&E) tax credit, is a federal benefit that provides companies dollar-for-dollar cash savings for performing activities related to the development, design, or improvement of products, processes, formulas, or software.
- **State Benefit** - Many states offer the R&D tax credit benefits, which generally follow the federal regulations and IRS guidance on what constitutes Qualified Research expenditures (QREs).
- **Payroll Tax Liability Offset** – A qualified taxpayer may elect to offset up to \$500,000 in payroll tax liability.
- **Industry Specific Credit (Orphan Drug Credit)** - The credit is a federal tax credit that gives companies incentives to develop medications / treatments for rare diseases that affect small populations. The credit is designed to help pharmaceutical companies lower their developmental costs.

# IRC § 41: The Four-Part Test



# Four Broad Types of Projects - Permitted Purpose



**NEW OR INCREMENTAL TO THE COMPANY, NOT TO THE INDUSTRY!!!**

# What is Qualified Research? The “Four-Part Test”

## 1. Permitted Purpose

The activity must relate to a new or improved business component's:

- Functionality
- Performance
- Reliability **OR**
- Quality

## 2. Technical Uncertainty at the Outset

Information available to the taxpayer cannot establish either of the following:

- Capability of developing the business component or methods and techniques required for development

**OR**

- Optimal design of the business component, such as most appropriate techniques, methods, materials, or technology to be used

# What is Qualified Research?

## The “Four-Part Test”

### 3. Technological in Nature

The activity performed must rely on principles of a hard science:

- Engineering
- Biology
- Physics **OR**
- Computer Science

### 4. Process of Experimentation

Substantially all the qualified activities must be intended to eliminate technical uncertainty through:

- Evaluation of Alternatives
- Testing of Hypotheses through modeling, experimentation, trial and error
- Refining or discarding of the hypotheses
- Design iterations, enhancements, optimization of performance





# 10 Myths Company's Believe Disqualifies Them From the R&D Tax Credit

1. R&D must be revolutionary
2. R&D requires labs and scientists
3. R&D credits won't help without profits
4. The research deduction undercuts the R&D credit's value
5. The R&D credit is only for the large
6. No R&D credit without success
7. No R&D credit where expenses are flat
8. R&D can't cut state tax liabilities
9. Tax reform may render the R&D credit unavailable
10. The R&D tax credit doesn't apply to my industry



# Is my company eligible for the R&D Tax Credit?

1. Are you developing new or improved products, processes, techniques, formulas, inventions or software?
2. Do you have a dedicated R&D department and/or a staff of engineers, software developers or scientists?
3. Do you have expenditures on test materials, prototyping, tooling and non-depreciable equipment, for R&D purposes?
4. Do you spend money on outside vendors assisting with your R&D / manufacturing efforts?
5. Lastly: Industry, Size, Profitability

# R&D Tax Credit - Window of Opportunity

## Qualifying Product Developments



## Qualifying Process Developments

- 6  $\sigma$
- Lean Manufacturing
- TQM/JIT
- Automation/Robotics
- Kaizen Initiatives

# Examples of Qualifying Activities

# Chemical Industry Examples

- ▶ Development of new or improved products
- ▶ Improvement of product yield or purity
- ▶ Sourcing of raw materials and other inputs
- ▶ Implementation of Six Sigma and Kaizan initiatives to optimize manufacturing processes and methods
- ▶ Managing and reducing pollution and optimizing the use of energy and other non-renewable resources
- ▶ Obtaining ISO certifications
- ▶ Compliance with federal and state regulations such as the Toxic Substances Control Act and Chemical Facility Anti-Terrorism Standards
- ▶ Scale up

# Chemical Industry Examples

- ▶ Production scalability issues
  - ▶ Vessel size and material composition, pH, temp, catalysts
  - ▶ System size changes
    - ▶ Proportion of surface area to mass causing distributions to laminar and turbulent flow
    - ▶ Reaction kinetics
    - ▶ Fluid mechanics
    - ▶ Thermodynamics
- ▶ Pilot batches
- ▶ Safety issues

# IRC § 41: Drivers of the Calculation





# Drivers of the Calculation – 3 Buckets of Expenses

## 1. Qualified Employee W-2 Wages

### Who Qualifies?

**One Step Up and One Step Down from Project Research and Experimentation**

### Supervision of R&D

- Department Heads, Strategists, Senior Engineers

### Direct R&D = Project Research and Experimentation

- Chemists, Engineers, Software Developers, Scientists, The Most Technical Personnel

### Support of R&D

- Data Gathering, Report Writing/Analysis, Determination of Specs & Requirements, Quality Assurance Testing, Equipment Modifications/Improvements





# Drivers of the Calculation – 3 Buckets of Expenses

## 2. Qualified R&D Supply Expenses

### Includes:

- Materials Consumed in Experimentation for New Product/Process Developments
- Materials Used for Building Product Prototypes
- Materials Used for Generating Samples during New Product Developments
- Materials Consumed in Trial Runs for New Products

### Excludes:

- Capitalized Equipment
- Overhead (electricity, heat, insurance, etc.)



# Drivers of the Calculation – 3 Buckets of Expenses

## 3. Qualified R&D Contract Research Expenses\*

(Outside Consultants/Contractors Hired on Behalf of the Taxpayer)

- Research or Development Activities Must Take Place in the USA
- Activities Must Qualify Per IRC § 41
- Taxpayer Must Be Liable for Payment Regardless of Outcome
- Taxpayer Must Retain Substantial Rights to Research

*\*Allowed at 65% of qualifying expense with some exceptions*

# Payroll Tax Credit and the Inflation Reduction Act of 2022



# Credit Utilization for Start Ups

- Typically, companies utilize the R&D tax credit against income tax liabilities.
- However, companies that are start-ups can alternatively utilize the credit to offset payroll taxes if they meet the following 2 requirements:
  - Have less than \$5 million in annual gross receipts
  - Have gross receipts for less than five years
- Companies can utilize up to \$500,000 of R&D tax credits per eligible year against the employer portion of the FICA payroll tax liability (\$250,000) and employer portion of the Medicare payroll tax liability (\$250,000).
- Companies can receive a benefit of up to \$2,500,000.

# Section 174



# Section 174 Implications for R&D Tax Credit

For tax years beginning after Dec. 31, 2021, the TCJA eliminated the option to deduct Section 174 Research or Experimental expenditures currently, and now requires taxpayers to capitalize and amortize them over five tax years for US expenses and fifteen years for foreign expenses.



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