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NAC Executive Insights

Escalation

Key Points

- The potential for relief under current contract documents is outlined with an emphasis on public infrastructure projects.
- The scope of a review for a contractor's claim for escalation impacts is outlined.
- Materials of construction particularly vulnerable to escalatory impacts are called out.
- Construction material indices are presented, demonstrating historical and recent price movements and future trajectories are forecasted.
- Strategies to address supply chain cost and schedule challenges are laid out, segregated to include client and contractor mitigation strategies.
- Labor related escalation is not covered in this Executive Insight.

Introduction

This Executive Insight looks at escalation, which affects both current and yet to be issued construction contracts. It is intended to provide a framework for providing immediate relief to ongoing contracts and also as an outline for strategies for owners and contractors on yet to be issued contracts. Key materials of construction susceptible to escalation are called out and potential indexes for any agreed to adjustments are suggested. The selected indices are U.S. focused and others are available.

Assessing the Potential for Relief under Current Contracts

This section discusses ongoing contracts with an emphasis on public infrastructure projects that may present added hurdles and opportunities. The structure followed is intended to aid owners and contractors in assessing any existence and pathways for any entitlement for material adjustment. It is broadly organized into two overarching activities: review of the contract and review of the contractor's claims. The first activity related to the in-place contract has been broken down as a five-step process. These steps are:

1. Review existing contract provisions
2. Identify federal acquisition regulations (FAR) provisions incorporated in the contract directly or indirectly by reference
3. Identify potentially applicable state laws
4. Review form of bid
5. Other considerations

Step 1. Review Existing Contract Provisions

An effective contract review for entitlement related to unforeseen escalation begins with careful consideration of several provisions related to change. The provisions of particular interest include:

- *Force Majeure* – Is any *force majeure* provision general or narrow/specific? Potential force majeure events include:
  - War (geopolitical tumult)
  - Changes in law, such as pandemic (Covid-19 as an example) related extensions or sanctions
  - Excusable delay, arising from unforeseeable cause, beyond control of contractor and without the fault or negligence of contractor
  - Otherwise unanticipated, such as the extended supply chain disruptions arising from Covid-19, restart and reconfiguration of global supply chains, and the impacts resulting from the war in Ukraine and the international community response.
- Material Escalation Clause, with attention paid to any agreed upon metrics, commodities, and reference cost basis
- Equitable adjustments/ change orders. Do these arise from:
  - Changes in scope or materials and timing? On Federal transit programs as an example, an assessment should be made as to whether contractor change orders subject to cost analysis per 2CFR Part 200[1] are incorporated within Federal Transit Administation (FTA) Procurement Circular 4220.1F. Were unit costs for escalated items of interest included and accepted as reasonable? Was required negotiating memorandum prepared (if yes, then review)?
  - Commercial impracticability, which courts may have a favorable view of, in some circumstances? Courts may relieve duty to perform if performance has unexpectedly become impracticable due to a supervening event.
  - Circumstances unforeseen by both parties? In particular, the timing of bid and execution of contract (extended period); market conditions present; whether there was an escalation clause requested and when; and assumptions of each party related to select unit costs (mutual mistake). In considering mutual mistake, consideration needs to be given to the contractor's bid assumptions and the engineer's estimate prepared for owner. Guidance can be obtained from Alcoa v. Essex 499 F Supp 53 (WD Pa 19080), which found that mutual mistake could be applied to prediction of future facts.

[1] 2 CFR Part 200 establishes uniform administrative requirements, cost principles, and audit requirements for Federal awards to non-Federal entities.

Equitable adjustment arguments have the potential for reformation of the contract by the courts.

Review of existing contract provisions should also include:

- Identifying required notice provisions, especially time of notice.
- Identifying duty to mitigate requirements.
- Identifying form of relief directly/indirectly provided for – time and money.
- Review payment provisions as it relates to adjustments to payments.

A final item of importance in this step of the review is to identify any "time is of the essence" provisions. For example, was the contractor's ability to lock in pricing for a given period based on anticipated procurement and construction schedule and then undermined by an excusable delay arising from owner changes, incomplete design information, or limits on access to work fronts?

Step 2. Identify Federal Provisions (FAR) Incorporated into Contract Directly or Indirectly by Reference

Given the more expansive use of Buy America and other federal provisions across the supply chain, this will become a growing area of focus not just in direct funded federal procurement, but also in those funding streams where these provisions will flow down. For illustration in this Executive Insight, three categories of general terms and conditions associated with FTA contracts are considered:

1. Price adjustments for regulatory changes. Buy America is the poster child here. Buy America was expanded on January 25, 2021, but it was not until March 7, 2022, that the Federal Acquisition Regulatory Council (FAR Council) published a final rule that increases domestic content requirements for Federal government procurements governed by the Buy America Act (BAA). The FAR Council issued the final rule pursuant to President Biden's Executive Order of January 25, 2021 (EO 14005). The FAR Council's final rule retains the core elements of the proposed rule issued on July 30, 2021, with some minor adjustments. The key elements of the final rule are: (1) an increase of the domestic content thresholds for domestic end products and construction materials (phased in); and (2) the establishment of enhanced price preferences for goods that US Office of Management and Budget (OMB) will designate as "critical" to U.S. supply chains in a future rulemaking. In reviewing the existing contract, one should ascertain whether a Buy America certificate was submitted (49 USC 5323(j)(1).
2. Price adjustments due to escalation. It is important to answer several key questions:
    a. Was FAR Subpart 16.203 and related contract language in FAR 52.216-2 included by reference or specifically excluded?

b. Was market research conducted with potential suppliers to determine possible need for an economic price adjustment clause before the solicitation was issued?
c. Is FAR 52.216-5 applicable for fixed price contracts having "unit prices" for itemized supplies?

3. Were itemized materials of construction called for or provided in the bid?
    a. Changes to Federal Requirements. It is important to review any agency Master Agreement at time of contract and subsequent amendments (if any) and ascertain the contractor's requirement to comply.

Step 3. Identify Potentially Applicable State Laws

Beyond the contract, state laws may provide avenues for relief from sudden and unanticipated escalation. These laws, and their interpretation and application, vary by state. Examples of such laws that both owner and contractor must be aware of include those related to:

- *Force majeure* and acts of God, which may include "all misfortunes and accidents arising from inevitable necessity which human prudence could not foresee or prevent."
- Impracticable where court may relieve duty to perform if performance has unexpectedly become impracticable due to a supervening event.
- Doctrine of Frustration of Purpose, where a supervening event fundamentally changed the parties' overall bargain. The scope of relief may include contract modification.
    - Legal duty to mitigate damages. Key questions include: Did the opportunity exist to pre-purchase and store materials? Was any partial payment for stored materials allowed or requested? Was any provision for same made in contractor's bid? Did opportunity exist to use cash to lock in pricing and assure delivery? Did suppliers claim *force majeure* or other similar mitigation, including any incorporation of the Convention on the International Sale of Goods (CISG) in supply contracts (CISG may not be applicable, given Buy America covers steel and other goods, but this must be confirmed).

Step 4. Review Form of Bid

Availability of a contract adjustment often begins with actions or inaction at the bid stage. In this regard, the form of bid becomes an important consideration. Key questions to answer include:

- Was industry or expert input solicited on form of bid/contract?
- Were any unit prices provided by the contractor?

- Was the time between bid and contract execution extended, creating a material cost risk for the contractor? Related to this, is an ascertain of the requested hold period on pricing; any extension requested; and actual hold period realized?
- Applicability of any delay provision (check for any no damages for delay provision)?

Step 5. Other Considerations

The owner must ascertain bid bond adequacy in the face of material escalation in project costs. Terminating a contractor assures full realization of increased materials costs, expensive and potentially extensive delays, and increased project inefficiencies.

The owner also must reach a judgement on the continued viability of the contractor considering not only their financial position on this contract, but also their broader book of business.

The preceding five steps focus on the particulars of the executed contract. A review of contractor claims is now discussed.

Review of the Contractor's Claims by Owner

An owner's careful review of contractor's claims must be carried out in conjunction with the review of the existing contract framework, including information provided at the bid stage, especially if incorporated by reference or effectively a bid qualification. This review should:

- Enumerate and classify contractor's claims with respect to:
  - Scope and basis of claim, identifying any claimed changes in scope by owner or delay by owner.
  - Confirm notice periods and timeliness of notices provided.
  - Identify any claim with respect to cost escalation and stated reasons.
  - Identify any steps taken to mitigate impacts.
- Assess claim allowability under the contract and must be based on a careful review as described earlier in this Executive Insight.
- Confirm current disposition of claim and whether a dispute has been created.
- Identify any potential for entitlement (excludes quantum) and the limits in scope or quantum.
  - Tabulate materials for which escalation is being claimed and characterize. Materials often subject to material escalation clauses are discussed in the next section.

- Review associated engineer's estimate at time of bid and any estimate done in conjunction with claim. Attention should be paid to the potential of "mutual mistake."

Key Materials of Construction

Key materials of construction susceptible to escalation are called out in this section and potential indices for any agreed to adjustments suggested. The selected indices are U.S. focused and others are available. Understanding past pricing history is good, but not sufficient. More important are understanding pricing volatility and its causes (short-term market or financial dislocations or longer-term market structural factors). Forecasts for many materials are often associated with financially traded commodity indices.

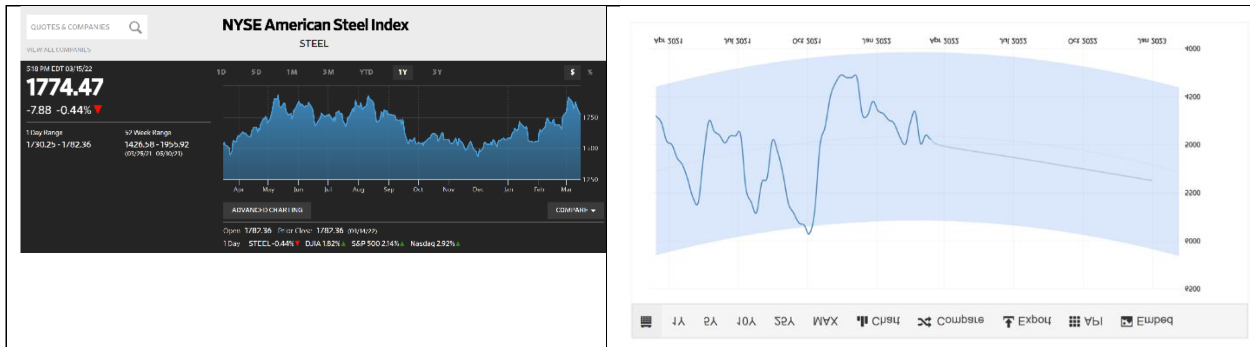
Materials of construction of principle interest include:

- Steel
- Copper
- Nickel
- Concrete
- PVC
- Diesel

Steel

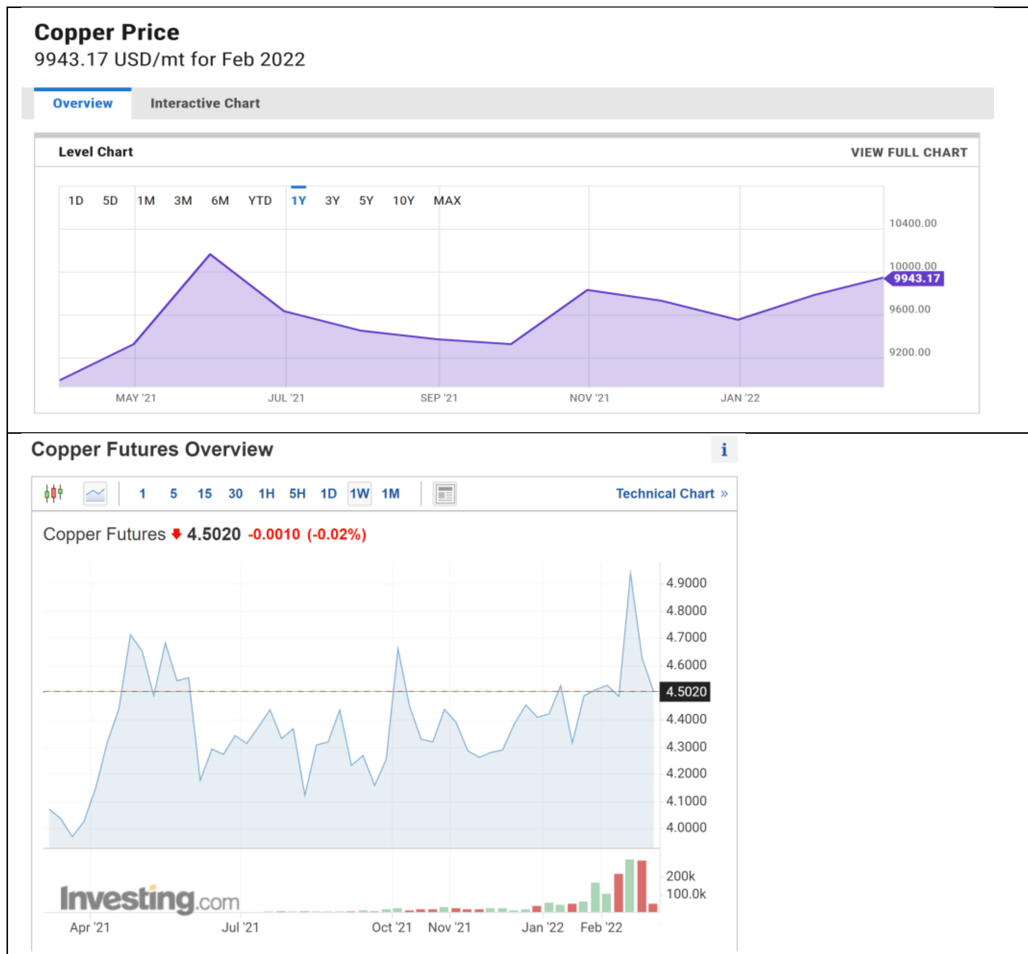
Many factors influence the pricing and availability of steel, particularly fabricated structural steel. While internationally sourced steel remains an option for many domestic uses, increased emphasis on Buy America as laid out in the 2021 Executive Order will put growing demand on domestic steel for either equipment and components in order to meet domestic source content, which will increase in steps over this decade. Factors affecting steel availability and pricing include material (iron ore and specialty metals such as nickel) lead times; general price escalation with particular attention to energy, labor, and shipment costs and required lead times; and shop load. During periods of high demand, bid cycle times may extend towards 30 days and promised delivery times extended, while during periods of volatile price changes, bid validity periods will move towards 30 days from more typical 60-day levels.

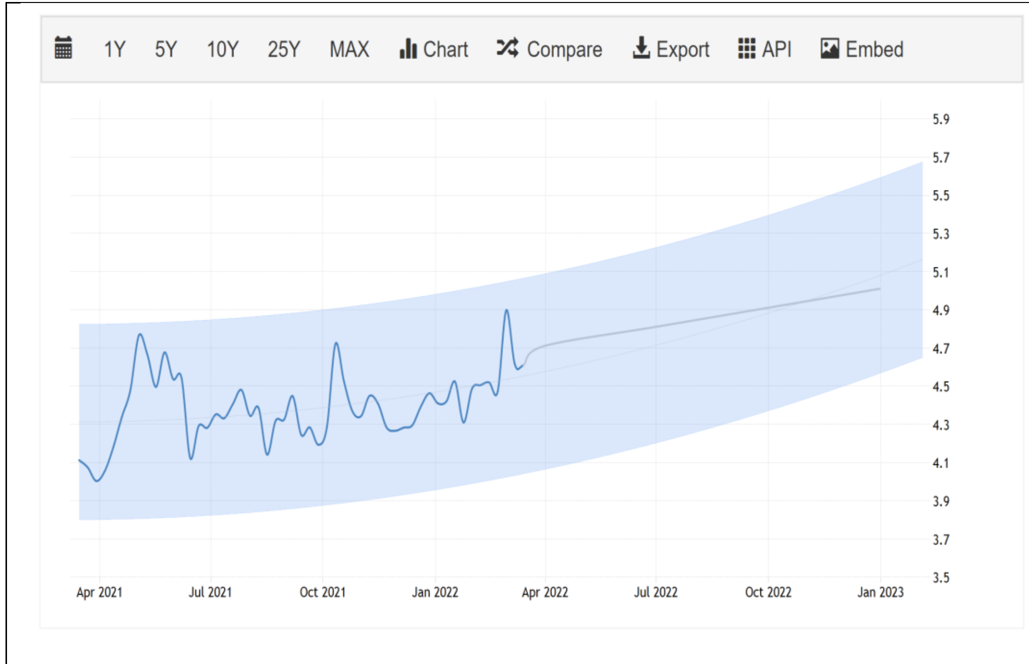
Several good indices can be found for steel and others exist. These include *ENR* steel price data, NYSE American Steel Index, and TradingEconomics.com, which provides banded forward forecasts. Note below the forward price moderation that is shown on the forecast.



Copper

Copper is used in a range of applications from electrical cable, power industry major components, industrial motors, and select piping systems. Multiple indices exist and include Ycharts.com; Investing.com (futures); and TradingEconomics.com. Note the upward price forecast on the last chart.

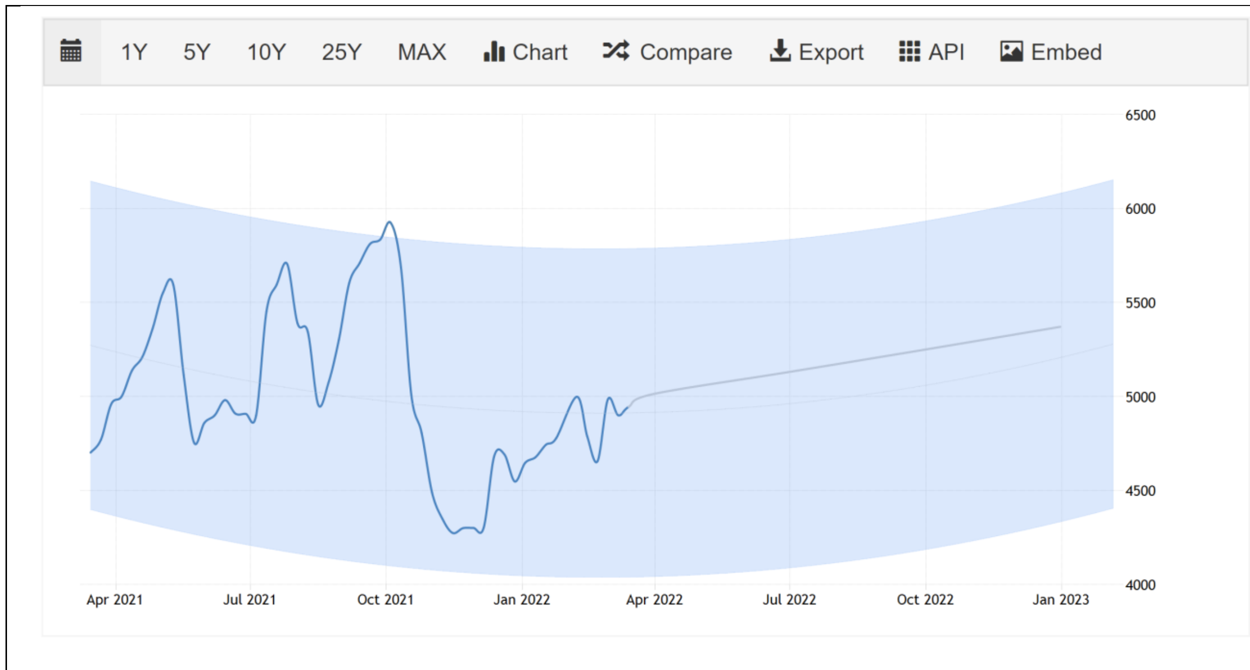




Nickel

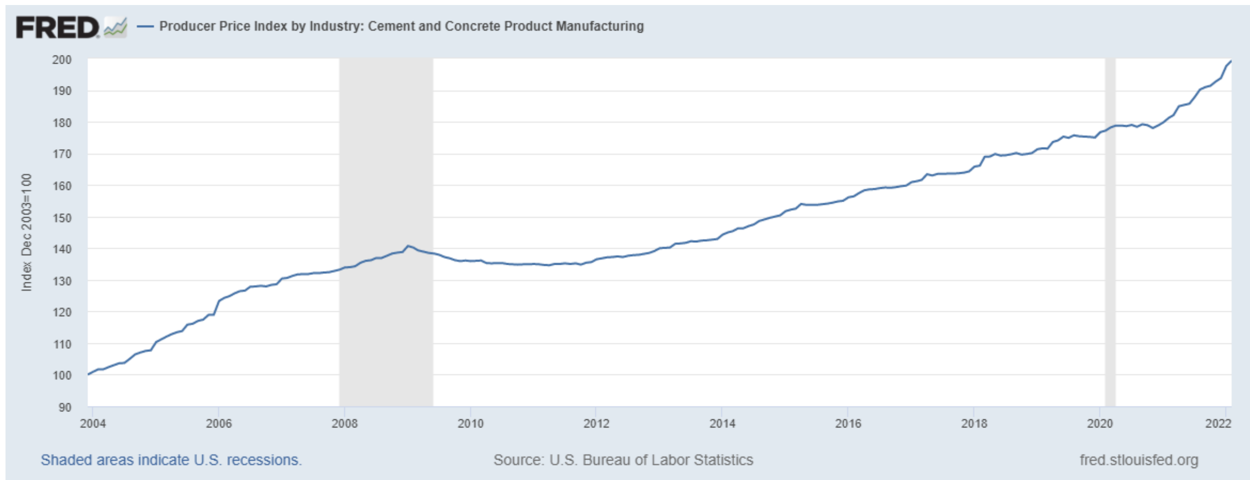
Used in specialty steels and other construction materials, nickel's corrosion resistance makes it an attractive component in many industrial and construction uses. Growing use in batteries has put pricing pressure on this material.

Indices include Market.businessinsider.com and TradingEconomics.com. The sharp spike in the following chart reflects an uncovered financial position. Understanding the drivers of various indices is important.



Concrete

Concrete is a go-to construction material. Its pricing is heavily influenced by local demand and labor factors. A national index (producer price index) prepared by the St. Louis Federal Reserve is shown below. Global demand for cement, especially cement with a low carbon footprint[2], is also a factor.



PVC

PVC is broadly used throughout the construction industry and is found in such items as piping, conduit, and geotextiles. PVC pricing is influenced by demand, but also by product mix from

[2] Prieto, R.. Environmental, Social and Governance Risks in the Engineering and Construction Sector, PM World Journal, Vol. XI, Issue VI, June 2022.

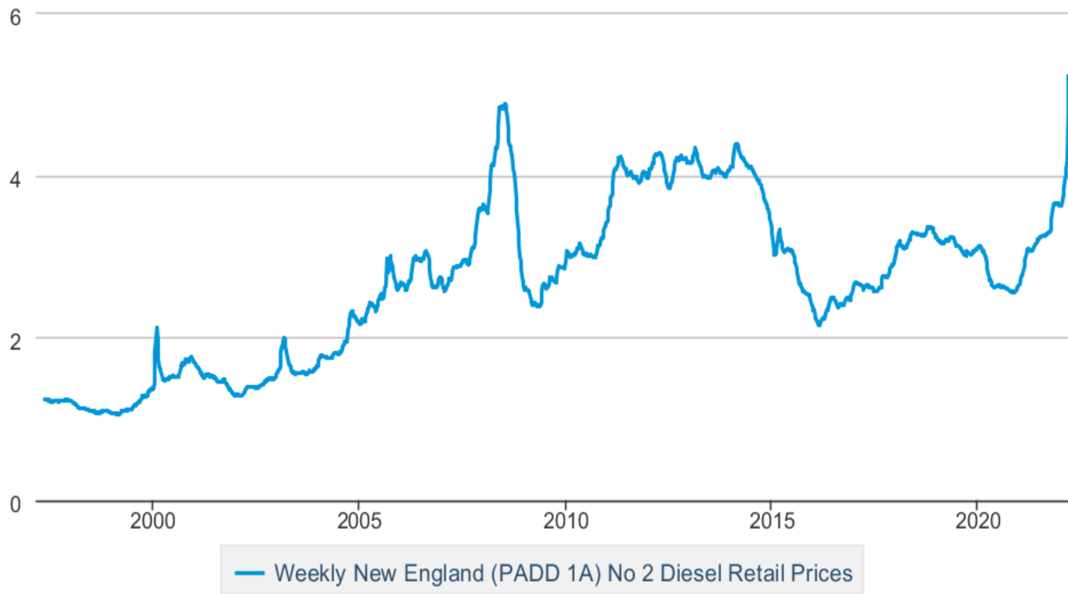
refineries. As the global supply chain restarted, inventories for PVC and closely related diesel were at all-time lows. PVC can be considered a global commodity. China futures pricing is one index for this commodity and may be found on investing.com.

Diesel

Similar to PVC, diesel is influenced by both global inventories and underlying crude oil prices. There is also a regional pricing component to diesel. The Energy Information Agency has regional price indices as shown below. The author also has found the pricing forecasts for gasoline prepared by GradingEconomics.com to be a reasonable forecast proxy.

Weekly New England (PADD 1A) No 2 Diesel Retail Prices

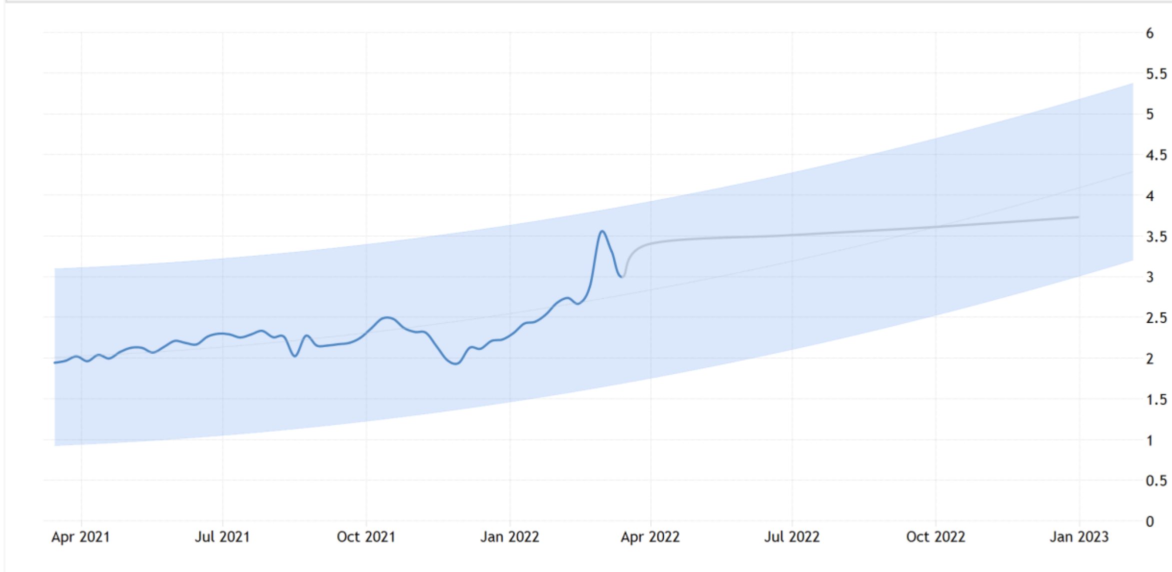
Dollars per Gallon



Gasoline 2022

Summary Forecast Stats Download Alerts

1Y 5Y 10Y 25Y MAX Chart Compare Export API Embed



Strategies to Address Supply Chain Cost and Schedule Challenges

Here the focus is on strategies to address cost and schedule challenges in supply chain constrained environments. For contracts currently underway, some of the measures outlined may serve to mitigate the challenges projects are already experiencing.

The strategies are broadly grouped into those described as “client mitigation” and those described as “contractor mitigation.” Another group, “supply chain mitigation” strategies, are sometimes broken out, but here have been consolidated with “contractor mitigation” strategies.

“Client Mitigation” Strategies

The client is the owner of the project and before the first contract is let holds all the potential benefits and associated risks. In supply chain constrained situations, including those with high commodity volatility and escalation, the client is faced with some fundamental questions:

- Does the planned project remain volatile in the current situation?
- What is the level of risk that contractors and the marketplace are willing to take on?
- Considering the associated cost of risk transfer, what is the optimum level of such transfer?
  - What are the owner’s capabilities to manage the retained risks as contrasted with the costs of risk transfer?
  - Do the counterparties (contractor, key elements of the supply chain) have the wherewithal to assume the transferred risks?

As clients go through this questioning process, so too do contractors. The result is the agreement on a mutually beneficial “client mitigation” strategy.

The range of such strategies include:

- Shortened bid validity periods, including incorporation of accelerated contract execution processes.
- Bid price indexing beyond a shortened bid validity window.
- Selection of a form of contract that provides the desired framework for targeted risk sharing and retention levels. These contract forms may be broadly grouped as:
  - Full risk retention by owner – contract forms could include open book contracting, cost plus fixed fee, and EPCM contracts.
  - Partial risk retention by owner, including risk sharing mechanisms – contract forms will include a target cost (entire project or defined measurable sub-elements) that may include shared savings or cost sharing above a threshold. Various collars and bands may be used to incentivize contractor management of costs.

- Risk limiting clauses, including:
    - "Day Zero" escalation (akin to a partial open book and applied only to select commodities).
    - Escalation clause, including indexing after an initial period where risks are transferred wholly to the contractor. Selection of the transfer period is important to ensure the contractor is focused on risk and cost management of critical commodities while limiting the tendency to shift cost risk to later project periods, thereby increasing schedule risk to the project. Escalation clauses should be limited to specific commodities and not broadly applied. Labor cost escalation presents some special challenges and are not covered in this Executive Insight.
    - Change provisions that provide for use of latest available pricing or if unit costs are reflected in the initial contract, appropriately indexed. Change provisions should recognize the costs associated with disruption and delay and appropriate procedures to determine the impact of changes agreed to at the outset of the project. Escalation has already created extra pressure on the project's cost and changes further exacerbate this pressure, creating a difficult change negotiation environment.
    - Delay provisions, which typically provide for time and are limited to no cost adjustment, must be opened up to recognize how the supply chain will respond at a delayed timeframe and how costs remaining will grow simply because of the delay.
- Owner-furnished materials allow for either single project or project portfolio procurement by the owner to ensure material availability and price certainty. Material would be free issued to the contractor with or without a contractor markup (traditional markup traded for avoidance of escalation and schedule risk). Owners may choose:
    - Storage at owner facility or site or pay supplier to store.
    - Procurement of complete or partial quantities of targeted commodities.
    - Storage at a contractor facility or site.
    - Forward hedging of commodity prices associated with any deferred material procurements.
  - Broadened interpretation and use of "equivalents" in design and procurement specifications.

“Contractor Mitigation” Strategies

“Contractor mitigation” strategies include supply chain mitigation strategies and involve both physical and financial measures. These include:

- Physical hedge through early procurement of material of concern. This may involve:
    - Delivery and storage by the contractor at the project site or another contractor facility or yard.
    - Material purchase with storage by supplier.
    - Delivery and storage at an owner provided facility with the owner taking title to the materials (with compensation to the contractor) in the event of a contractor default or replacement.

Physical hedges act to assure material availability when supply chain delivery schedules are uncertain or extending. Physical hedges provide cost certainty.

- Financial hedges addressing either future cost or schedule uncertainty.
    - Cost uncertainty can be mitigated through the purchase of a future hedge against the appropriate cost indices as discussed earlier in this Executive Insight.
    - Schedule uncertainty through supplier prepayment (in whole or in part) for delivery assurance.
- Supply chain mitigation through a combination of risk transfer and management measures, including:
    - Substantive risk transfer to suppliers and subcontractors equal to or exceeding risks retained by the contractor. Any shortfall in risk transfer remains with the contractor for mitigation.
    - Management measures begin with expanded supply chain monitoring, which is often accomplished by more extensive flow down provisions to sub-tier suppliers. These expanded flow down provisions may deal with workload and inventory reporting of key materials of interest.

During periods of rapid escalation, contractors need to remain aware that:

- Reimbursable rate adjustments (if provided for) will likely lag cost realization.
- Risk reserves established at the outset of the contract will provide less effective risk mitigation as their coverage is effectively eroded by escalation.
- Profitability rates on fixed fee contracts are deteriorated as the underlying cost base grows.

Broader Perspective is Required

Escalation is always a potential project risk. The expanded focus on escalation during periods of volatility and clear commodity price growth represents a short-term understanding of the challenges and the need to address them. Concerns over escalation/inflation risk must recognize longer term considerations and changing geopolitical realities.

Summary

In this Executive Insight, how to assess existing contracts in light of sudden, sharp escalation has been examined. Principal materials of construction and potential indices to understand the impacts and likely trajectories of their cost over time have been discussed. Finally, some forward-looking strategies to deal with escalation on future contracts have been outlined.

About the Author

Bob Prieto was elected to the National Academy of Construction in 2011. He is a senior executive who is effective in shaping and executing business strategy and a recognized leader within the infrastructure, engineering, and construction industries.

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