

Foreword

It is our great pleasure to present you with this inaugural issue of the *Bechtel Technology Journal (BTJ)*. The *BTJ*'s compilation of technical papers addresses current issues and technology advancements from each of Bechtel's six Global Business Units (GBUs): Bechtel Systems & Infrastructure, Inc.; Civil; Communications; Mining & Metals; Oil, Gas & Chemicals; and Power.

The objective of the *BTJ* is to provide our customers and colleagues a fresh look at technical and operational advances that are of prime interest to the various industries we serve. This publication is a logical extension of our attempts, over the years, to look over the horizon to identify relevant issues that pose unique challenges and require new and innovative technical solutions.

Given the complexity of the arenas in which we do business, it is not difficult to identify numerous issues; the real challenge is to prioritize them relative to their impact on performance and return on investment. Therefore, we challenge our technical experts to collaborate with their counterparts around the world to define the critical issues insofar as possible. We then task them to address these issues from a technical perspective. Judging by the response to their past papers and presentations, we have experienced a high degree of success in many areas.

The papers in the *BTJ* are grouped by business unit, although many apply to more than one. The primary authors are from their indicated Bechtel business unit or an affiliate; some co-authors are from our customer organizations.

We want to take this opportunity to thank the authors and co-authors for helping make the *BTJ* a reality, and we certainly hope that you find their contributions of value. If you have an idea for a future paper, please feel free to contact me at rnarula@bechtel.com. Your suggestions are always welcome.

Sincerely,



A handwritten signature in black ink that reads "Ram Narula" with a horizontal line underneath.

Ram Narula
Chief Technology Officer, Bechtel Power
Chair, Bechtel Fellows