



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE
COMMISSION
WASHINGTON, D.C. 20549

Mail Stop 3720

February 3, 2009

Mr. Frank Plastina
Chief Executive Officer
Tekelec
5200 Paramount Parkway
Morrisville, North Carolina 27560

Re: Tekelec

Annual Report on Form 10-K for the fiscal year ended December 31, 2007
Filed February 27, 2008
File No. 0-15135

Dear Mr. Plastina:

We have examined your filings and letter dated December 18, 2008, and have the following additional comment. Please comply with our comment in future filings. Confirm in writing that you will do so and also explain to us how you intend to comply. Please do so within 10 business days from receipt of this letter. Please understand that after our review of your responses, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comment or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year ended December 31, 2007

Definitive Proxy Statement Incorporated By Reference Into Part III of Form 10-K

Compensation Discussion and Analysis, page 18

1. We note your response to comment two from our letter dated December 5, 2008. We are unable to evaluate your competitive harm argument for the omission of material individual performance objectives, targets and thresholds without a more specific explanation of what those objectives, targets and thresholds are. Please expand your analysis to specifically address each material performance objective, target and threshold.

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please file your letter over EDGAR. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Please contact Paul Fischer, staff attorney, at (202) 551-3415, Kathleen Krebs, Special Counsel, at (202) 551-3350, or me at (202) 551-3810 with any other questions.

Sincerely,

Larry Spigel
Assistant Director

cc: Katherine Ashton, Esq.
Via Facsimile, 310-576-2200