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Summary

- Developer of traffic-modeling tools for analyzing urban and regional road pricing and other transportation policies to improve urban mobility and generate funds for transport investment.
- Authority and quantifier on energy, transport and environment; road pricing, public transit and urban transportation; electricity generation economics; climate policy; energy usage and supply; bicycling; traffic crashes; cost-benefit analysis; policies to internalize societal costs of energy and transport.
- Champion and pioneering advocate for “livable streets” including bicycling facilities, pedestrians’ rights, traffic pricing and policies to reduce automobile use and dependence.
- Author (four books), blogger, essayist, journalist, dynamic public speaker.

Komanoff is director of the consulting firm **Komanoff Energy Associates**, co-founder and director of the **Carbon Tax Center**, a founding trustee of the **Tri-State Transportation Campaign**, “re-founder” of the renowned bicycle-advocacy organization **Transportation Alternatives**, an organizer with the pedestrian rights organization **Right Of Way**, and traffic modeler and transit advisor for both the **Move NY** campaign and the **Nurture Nature Foundation**. His work combines expertise in policy analysis, a flair for expressing data in concrete terms, and a passion for progressive social change.

Komanoff graduated with honors from Harvard College in 1968 with a B.A. in Applied Math.

Developer of traffic-modeling tools to support road pricing and livable streets

Komanoff is creator and curator of the “[Balanced Transportation Analyzer](#) (BTA),” a PC- or Mac-capable integrated spreadsheet model that quantifies travel-speed gains, toll revenues and other benefits of road-pricing and ancillary measures (e.g., transit investments and fare changes; surcharges on taxis and app-based for-hire vehicle services; highway expansions or shrinkages) for a city or metro region.

The BTA is geared to New York City and has been used there to assess congestion pricing as well as transit fare hikes, transit service expansions and cutbacks, and for-hire vehicle surcharges. It is currently being adapted to assess the impacts of similar measures in a major West Coast city.

Development of the BTA began in 2007. It now (Fall 2019) has 75 interlocking worksheet “tabs” that are stocked with baseline travel data and connected by thousands of equations and algorithms. These tabs “communicate” with each other based on user inputs that correspond to proposed road tolls and/or other potential policies. Data inputs are made in a single tab, allowing them to be easily processed and understood, and the calculation of results is instantaneous.

Results include:

- gross and net revenues from congestion or other traffic pricing
- changes in average travel speeds (separated among different times of day, between weekdays and weekends, and within vs. outside the urban core)
- changes in vehicle volumes (similarly separated)
- monetization of travel-time savings, fewer traffic crashes, and reduced air and carbon emissions, as well as the “amenity” that drivers lose from opting out of some tolled car trips.

The consulting firm that advised New York Gov. Andrew Cuomo’s “Fix NYC” congestion pricing task force and is now helping devise the congestion toll scheduled to start in early 2021 has used the BTA as its primary analytical tool since 2017. The [task force’s final report](#) (Jan. 2018) includes these comments:

The traffic and revenue estimates of various tolling strategies were performed using the Balanced Transportation Analyzer, or BTA. This spreadsheet model, developed by Charles Komanoff, provides a framework for assessing the extent to which zone pricing can both generate revenue and improve traffic conditions in the Central Business District (CBD). The BTA was chosen as the tool for this study because it offers four key advantages in supporting the zone pricing analysis:

- *As a spreadsheet model, it can rapidly evaluate and compare multiple tolling strategies.*
- *The model draws from a broad array of well-documented sources of traffic and transportation data.*
- *It is transparent. The underlying data is clearly identified and the assumptions governing the use of this data are highlighted.*
- *It yields the outputs that are most relevant to our analysis—namely, increase in revenue, improvement in average vehicular speed, and reduction in congestion.*

The BTA is continually updated. The current version is always available on the Internet via this link: http://www.nnyn.org/kheelplan/BTA_1.1.xls.

In its [profile of Komanoff](#), *Wired* magazine pronounced the BTA a “masterpiece” for capturing the interactivities among different travel modes, for reflecting the feedbacks between drivers’ tolls costs and time savings, and for allowing estimation of the “social delay costs” caused by the proverbial incremental car trip into the urban core. The BTA is a powerful yet instantly-usable tool that allows individuals and organizations to test congestion-pricing and other transport management proposals that heretofore only government agencies could assess.

The BTA was developed under the tutelage of the late New York civic titan Theodore W. Kheel, and with generous support from Kheel’s Nurture Nature Foundation.

Komanoff, whom the *Wired* profile called “the man who could unsnarl Manhattan traffic,” has presented the BTA model to city officials in New York, San Diego and Seattle; at high-level transport meetings in Washington and Paris; to city and university officials in Guangzhou, China,

and to national and regional transportation and environment ministers in Beijing and Hangzhou, China.

Authority on energy, transport and environment

Throughout his more than 4-decade career as a policy analyst, Komanoff has addressed the two largest sources of environmental and social harm in industrial societies: misallocation of resources in electricity generation, and failure to balance motor vehicle transport with other travel modes including public transit.

Transport

Since 2008, Komanoff has been a key component of citizens-based campaigns to implement road tolling as a means to reduce traffic gridlock and create a robust new revenue source for public transportation. (See discussion above of the BTA spreadsheet.) He was principal author of the Nurture Nature Foundation's pathbreaking 2008 report, *Balancing Free Transit and Congestion Pricing*.

Komanoff was a founding trustee of the [Tri-State Transportation Campaign](#), whose staff work to reform transport planning and financing in the New York region. He edited and co-authored Tri-State's founding document, the *Citizen Action Plan*, a holistic approach to regional transport emphasizing road pricing, center-oriented development and strategic transit upgrades.

Komanoff conceived, managed and edited the *Bicycle Blueprint*, the most ambitious bicycle-transport plan ever published for any U.S. city. He contributed a volume, *Environmental Benefits of Bicycling and Walking in the United States*, to FHWA's *National Bicycling and Walking Study*. He has spelled out road-pricing proposals in a report for the Energy Foundation and numerous periodicals ranging from the *Pace Environmental Law Review* to numerous newspapers and magazines. He composed the chapter on bicycling for the *Encyclopedia of Energy*.

Energy and Electricity

Throughout the 1970s and '80s — a period of ferment and debate over the economics of nuclear power — Komanoff was the leading U.S. source of credible information on reactor costs. Through painstaking data collection, rigorous analysis, a stream of articles and books, and clear articulation to journalists, he helped policy-makers and the public grasp the dimensions of nuclear power's spiraling costs in the United States. During this period, Komanoff consulted for two Congressional agencies, the U.S. Department of Energy, and close to two dozen states including New York, California, Texas and Florida; presented expert testimony before the U.S. Nuclear Regulatory Commission and 20 Public Utility Commissions; testified before four Committees of Congress and the Select Committee on Energy of the House of Commons (U.K.); and tutored a generation of journalists on the extent and causes of cost escalation in the U.S. nuclear power industry.

Komanoff represented Manhattan community groups in evaluating and mitigating a proposal by Con Edison to expand its East 14th Street steam-and-electric station; analyzed the potential for electricity conservation in the New York area for a coalition seeking energy alternatives to the Indian Point reactors in Westchester County; and published [Ending The Oil Age](#), a detailed post-

9/11 policy prescription for immediately reducing U.S. oil consumption by up to 10%. He was co-developer of “Greening A Block,” an ambitious effort to implement energy-efficient heating, hot water and electric systems on a community scale in buildings on Manhattan’s Lower East Side. In 2019 he authored a report for the Natural Resources Defense Council, [California Stars](#), documenting and quantifying California’s outsize progress vis-a-vis the other 49 states in decoupling economic growth from fossil fuels and carbon emissions.

In 2007, Komanoff founded the [Carbon Tax Center](#), a clearinghouse and resource center to educate and inform policy makers, opinion leaders and the public about the benefits of and critical need for robustly rising taxes on the carbon contents of fossil fuels. CTC has established a strong presence in Washington DC, within the environmental community and in the national civic arena.

Environment

Komanoff’s work on environmental policy dates to 1971-72, when he co-directed the Council on Economic Priorities’ landmark study of air and water pollution in the U.S. electric power industry, *The Price of Power*. In 1972-74 he worked for the NYC Dept. of Environmental Protection as a senior environmental economist, composing original analyses that revealed the poor economic prospects for both the Storm King pumped-storage project in the Hudson Highlands and a vast LNG tank farm on Staten Island, contributing to the demise of both ventures. Komanoff has published popular and technical articles on air pollution from electric generation and motor vehicles and on the difficult balancing required to advance much-needed wind power projects.

Komanoff is also an authority on noise pollution. His monograph, *Drowning In Noise: Noise Costs of Jet Skis in America*, published by the Noise Pollution Clearinghouse, used a multi-disciplinary approach to impute dollar costs to noise from jet skis and rank mitigation options. He advised Manhattan community groups in their efforts to reduce noise emissions from a large telecommunications facility in lower Manhattan and a heliport on Manhattan’s West Side.

NYC activist and advocate for “livable streets”

Komanoff brings to advocacy a flair for translating data into human terms, familiarity with New York City’s rich history, solidarity with the city’s diverse cultures, and a passion for social justice.

Komanoff “re-founded” the NYC-based advocacy organization, Transportation Alternatives, in 1986 and led it as unpaid (but virtually full-time) president for six successful and ground-breaking years. He forged T.A. into a vibrant force for non-motor transportation in the New York region and made it a model for grassroots transportation advocacy in dozens of U.S. cities. Under his leadership T.A. defeated a proposed Midtown bike ban and expanded cycling access to area bridges, roads and transit systems. *Bicycling* magazine acknowledged Komanoff’s accomplishments by naming him a 1990 “Bicyclist of the Year.”

After stepping down as T.A. president in 1992, Komanoff co-founded the pedestrian rights organization [Right Of Way](#). He spearheaded the group’s “street memorial” project that created hundreds of individualized on-site memorials to New York City pedestrians and cyclists and was recognized in 2001 by *Industrial Design* Magazine for advancing socially conscious design. Komanoff’s

1999 report [Killed By Automobile](#) drew on statistical analysis by Right Of Way volunteers of nearly 1,000 NYC pedestrian and cyclist fatalities. These endeavors provoked a paradigm shift from victim-blaming to driver culpability that contributed to reducing New York City pedestrian fatalities and helped lay the groundwork for the city's "Vision Zero" initiative against traffic dangers. Right Of Way re-organized in 2013 with new energy from a younger generation of activists whose artistry and use of social media have infused the work with greater humanity.

Writer: Selected Bibliography

List is limited to printed pieces and omits dozens of Web-published posts on *Grist*; more than 160 posts on *Streetsblog*; and several hundred posts on the Carbon Tax Center's blog; some links are available at www.komanoff.net.)

Books

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